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VI.—*Contributions towards a Knowledge of the Burmese Flora.*

By S. Kurz.

(Continued from Vol. XLV, p. 310.)

RHIZOPHOREÆ.

Conspectus of Genera.

Subord. I. RHIZOPHOREÆ. Ovary inferior. Albumen none. Seeds germinating on the tree, the thick radicle rapidly enlarging and protruding from the summit of the fruit. Salt-loving shrubs or trees.

* *Ovary-cells with 2—6 ovules.*

Rhizophora. Calyx 4-cleft. Petals entire. Anthers 8—12, nearly sessile. Ovary 2-celled, the cells 2-ovuled.

Ceriops. Calyx 5—6-cleft. Petals notched, appendaged. Stamens 10—12. Ovary 3-celled, the cells 2-ovuled.

Kandelia. Calyx 5—6-cleft. Petals cut. Stamens many, the filaments capillary. Ovary 1-celled, with 6 ovules.

* * *Ovary-cells with a solitary ovule.*

Bruguiera. Calyx 8—14-cleft. Petals 2-cleft, appendaged. Stamens 16—28, the filaments filiform. Ovary 2—4-celled.

Subord. II. LEGNOTIDEÆ. Ovary inferior, almost superior or free. Embryo imbedded in a fleshy albumen. Seeds germinating in the ordinary way.

* *Ovary inferior. Calyx bell-shaped beyond the ovary.*

Carallia. Calyx-lobes short, erect. Stamens 10—16. Ovary-cells 2-ovuled. Flowers cymose.

Pellacalyx. Calyx-lobes short, recurved. Stamens 10—12. Ovary-cells many-ovuled. Flowers fascicled.

* * *Ovary superior or nearly so, with a broad base adnate to the calyx.*

Gynotroches. Calyx without bractlets. Stamens 8—10, the filaments elongate. Ovary-cells 4-ovuled.

Rhizophora, L.

Conspectus of Species.

Flowers pedicelled, the petals villous along the borders; stamens 8, ... *R. mucronata.*
Flowers sessile, the petals quite glabrous; stamens 8—12, ... *R. conjugata.*

1. R. MUCRONATA, Lamk. Enc. VI. 89; Wight Icon. t. 238; Miq. Fl. Ind. Bat. II. 584. (*Rhizophora Mangle*, Roxb. Fl. Ind. II. 459; *R. stylosa*, Griff. Not. Dicot. 665. t. 640; *Rh. macrorrhiza*, Griff. in Med. and Phys. Trans. Calc. VIII. 1836. 8 and Not. Dicot. 664).

HAB. Frequent in the mangrove-swamps of the shores from Arracan down to Tenasserim.—Fl. Fr. ∞.

2. R. CONJUGATA. L. sp. pl. 634; Miq. Fl. Ind. Bat. II. 584. (*R. Candelaria*, Griff. in Med. and Phys. Trans. Calc. VIII. 7).

HAB. Common in the mangrove swamps along the shores from Arracan down to Tenasserim and the Andamans.—Fl. Fr. ∞.

Ceriops, Arn.

Conspectus of Species.

Cymes compact, on very short peduncles; petals bristly fringed towards their tips, .. *C. Roxburghiana.*

Cymes rather lax; petals terminated by 2 or 3 club-shaped appendages, *C. Candolleana.*

1. C. ROXBURGHIANA, Arn. in Ann. Nat. Hist. I. 362; Miq. Fl. Ind. Bat. II. 591. (*Rhizophora decandra*, Griff. Not. Dicot. 663; *Bruguiera decandra*, Griff. in Med. and Phys. Trans. Calc. VIII. 1838. 10).

HAB. Common in the littoral forests all along the shores from Chittagong down to Tenasserim and the Andamans.—Fl. HS.; Fr. CS.

2. C. CANDOLLEANA, Arn. in Ann. Nat. Hist. I. 364; Wight Icon. t. 240; Miq. Fl. Ind. Bat. II. 590.

HAB. Frequent in the mangrove swamps of the Andamans.—Fl. HS.; Fr. CS.

Kandelia, W. A.

1. K. RHEEDEI, WA. Prod. I. 34; Wight Ill. I. 209. t. 89; Miq. Fl. Ind. Bat. II. 585.

HAB. Frequent in the littoral forests, especially the tidal ones, at the debouchures of the larger riversof Pegu and Tenasserim.—Fl. HS.; Fr. RS.

Bruguiera, Lamk.

Conspectus of Species.

Subg. I. Kanilia, Bl. Calyx-tube almost club-shaped, the limb 8-cleft. Petals 8, bearing bristles at the tips. Stamens 16, the filaments filiform and longer than the cordate or ovate anthers. Fruit cylindrical.

Calyx-tube narrowed at base, ribbed, the lobes very short and stiff, ... *B. parviflora.*
Calyx-tube obtuse at the base, smooth, the lobes nearly as long as the tube, .. *B. caryophylloides.*

Subg. II. Mangium, Bl. Calyx-tube almost bell-shaped, the limb 10—14-cleft. Petals 10—14. Stamens 20—28, the anthers linear, longer than the filaments. Ovary 3—4-celled. Fruit turbinate..... *B. gymnorhiza.*

1. B. PARVIFLORA, WA. Prod. I. 311; Miq. Fl. Ind. Bat. II. 589; Griff. in Med. and Phys. Trans Calc. VIII. 10. *(Rhizophora parviflora*, Roxb. Fl. Ind. II. 461).

HAB. In the littoral forests of Tenasserim and the Andamans. (Helf. 2207).—Fl. CS.

2. B. CARYOPHYLLOIDES, Bl. Enum. I. 93; Miq. Fl. Ind. Bat. II. 589. *(Rhizophora caryophylloides*, Griff. Not. Dicot. t. 624).

HAB. In the mangrove swamps at the debouchure of the Salween in Upper Tenasserim.—Fl. Febr.; Fr. Apr.

3. B. GYMNORHIZA, Lamk. Enc. Bot. IV. 696; Miq. Fl. Ind. Bot. II. 586; Griff. in Med. and Phys. Trans. Calc. VIII. 10. *(B. Wightii*, Bl. Mus. Bot. 138; Miq. Fl. Ind. Bat. II. 587; *B. Rheedei*, Bl. Enum. I. 92; Miq. l. c.; Wight Icon. t. 239. A.; *B. parietosa*, Griff. Not. Dicot. 670. t. 641; *B.* 10-*angulata*, Griff. Not. Dicot. 669; *B. eriopetala*, Wight Ill. I. : 10 and Icon. t. 239).

HAB. Common in the littoral forests all along the coasts from Chittagong down to Tenasserim and the Andamans.—Fl. Jan.—May.

I know only of one species of this alliance, flowering while still a shrub and becoming a tree of 80 ft. in height in favourable situations. The indument of the petals and the number or absence of bristles appear to me fallacious characters.

Carallia, Roxb.

Conspectus of Species.

Leaves usually entire; petals not embracing the filaments, ... *C. lucida.*
Leaves serrulate; petals embracing the filaments, ... *C. lanceæfolia.*

1. C. LUCIDA, Roxb. Corom. Pl. III. 211 and Fl. Ind. II. 481; Griff. in Med. and Phys. Trans. Calc. VIII. 11; WA. Prod. I. 312; Wight Icon. t. 605.—*(C. integerrima*, DC. Prod. III. 33; Bth. in Linn. Proc. III. 74; Bedd. Fl. Sylv. t. 193; *C. zeylanica*, Arn. in Wight Illustr. t. 90).

HAB. Frequent in the tropical and moister upper mixed forests, ascending into the hill-forests up to 4000 ft. elevation, rare in the low forests, all over Pegu, Martaban, and Tenasserim.—Fl. C. S.; Fr. HS.

2. C. LANCEÆFOLIA, Roxb. Fl. Ind. II. 481; Wight Icon. t. 604; Bth. in Linn. Proceed. III. 75.—*(C. confinis*, Bl. Mus. Lugd. Bat. I. 129).

HAB. In the tropical forests of Tenasserim.

Gynotroches, Bl.

1. G. AXILLARIS, Bl. Mus. Lugd. Bat. I. 127. t. 31; Bth. in Linn. Proc. III. 76.

HAB. Upper Tenasserim, Moulmein (Lobb.).

COMBRETACEÆ.

Conspectus of Genera.

Subord. I. COMBRETEÆ. Calyx-lobes valvate. Stamens without alternating glands at the base, the filaments often inflexed in bud; anthers versatile, opening in longitudinal slits. Ovary with 2 to 12 suspended ovules. Flowers in racemes, spikes, or heads.

* *Calyx-limb deciduous.*

× Calyx-tube short, constricted but not produced beyond the ovary.

Terminalia.—Petals none. Stamens inflexed in bud, exserted. Flowers spiked or panicled. Erect trees.

Combretum. Petals very rarely wanting. Stamens straight in bud. Flowers usually racemose or panicled. Usually scandent shrubs.

× × Calyx-tube elongate and produced beyond the ovary.

Anogeissus. Calyx-tube 2-winged at the base. Stamens 10, exserted. Leaves alternate. Flowers in heads, small.

Quisqualis. Calyx-tube very long and slender, the limb small. Stamens 10, exserted. Leaves opposite. Flowers showy, in racemes.

* * *Calyx-limb persistent.*

Calycopteris. Calyx-tube 5-ribbed, not produced beyond the ovary, the limb enlarging. Stamens 10, included. Leaves opposite. Flowers racemose. Climbers.

Lumnitzera. Calyx-tube elongate, narrowed beyond the ovary. Stamens 5 or 10, exserted. Leaves alternate. Flowers racemose. Trees or erect shrubs.

Subord. II. GYROCARPEÆ. Calyx-lobes valvate or imbricate. Stamens alternating with as many glands or staminodes; filaments straight in bud; anthers adnate, opening by a slit along the inner edge or in 2 valves. Ovary with a solitary pendulous ovule. Leaves alternate. Flowers cymose.

Illigera. Calyx-lobes valvate, deciduous. Fruit extended into 2 or 4 lateral wings. Climbers with 3-foliolate leaves.

Gyrocarpus. Calyx-lobes imbricate, 2 of them persistent and enlarging wing-like. Nut 2-winged at the top. Erect trees with entire or lobed leaves.

Terminalia, L.

Conspectus of Species.

Subg. I. Myrobalanus, Gærtn. Fruit a fleshy drupe, compressed or obsoletely angular, the putamen bony.

* *Spikes simple, solitary in the leaf-axils.*

O Spikes, quite glabrous.

Glabrous or pubescent; petioles very short, the base of the broad leaves more or less rounded,; drupes 1½—2 in. long, compressed, ... *T. catappa.*

As preceding but glabrous, the base of the leaves more or less acuminate; drupes about an in. long, obsoletely 5-angular, ovoid-oblong, red inside, ... *T. procera.*

O O Spikes puberulous or tomentose.

Leaf-buds rusty villous; leaves obovate, on 2—3 in. long petioles, usually silky pubescent; drupes obovoid, silky puberulous, ... *T. Belerica.*

* * *Spikes more or less panicled at the end of the branchlets, puberulous or tomentose.*

Young shoots and underside of the oblong leaves rusty villous, the petiole short; ovary villous; drupes oval, glabrous, ... *T. chebula.*

As preceding, but ovary quite glabrous, the flowers and fruits much smaller, the leaves more coppery villous beneath, ... *T. tomentella.*

Very young shoots rusty villous; leaves smooth and glabrous, acuminate, the petiole short; drupes oblong-lanceolate, obsoletely 5-cornered, glabrous, ... *T. citrina.*

Subg. II. Pentaptera, Roxb. Fruit a dry nut, with a chartaceous or fibrous-coriaceous pericarp, compressed or 3—5-cornered with as many equal or unequal wings, or only with 2 or a single wing all round.

* *Nuts usually 3-cornered, the angles expanded into 2 equal, or 3—1 unequal wings.* (Chuncoa, Pav.)

× Nuts large, equally 2-winged, 1½—2 in. long. Spikes simple, axillary.

All parts glabrous; spikes puberulous or tomentose; leaves obovate, the petiole 2—3 in. long; nut 3-cornered, with 2 large equal spreading wings, about 3—3½ in. across, *T. bialata.*

As preceding, leaves smaller and shorter petioled; nuts equally 2-winged, only ½—¾ in. across, ... *P. pyrifolia.*

× × Nuts small, unequally 2—3-winged. Spikes forming terminal panicles.

Fruits unequally 3-winged, puberulous, brown, ... *T. paniculata.*

Fruits much smaller than in preceding, equally 2-winged, almost glabrous, pale coloured, ... *T. myriocarpa.*

* * *Nuts 4- or 5-cornered, all the angles expanded into equal wings.*

All parts more or less greyish tomentose; leaves strongly net-veined beneath, the petiole short, furnished with 2 stalked turbinate glands, ... *T. alata.*

All parts glabrous; leaves not prominently net-veined beneath, the petiole short, with 2 stalked turbinate glands; spikes panicled, like the calyxes, puberulous or almost tomentose, ... *T. crenulata.*

As preceding, but the panicled spikes and outside of calyx quite glabrous, .. *T. macrocarpa.*

1. T. Catappa, Linn. Mant. 519; DC. Prod. III. 11.; WA. Prod. I. 313; Roxb. Fl. Ind. II. 430; Bot. Mag. t. 3004; Wight Icon. t. 172; Bedd. Fl. Sylv. t. 20 (*T. Moluccana*, Lamk. Dict. I. 349; DC. l. c., non Roxb.).

Hab. Frequent in the beach-forests of the Andaman islands, probably also in Tenasserim; much cultivated in villages all over the country.—Fl. May, June; Fr. Apr.

2. T. procera, Roxb. Corom. Pl. III. t. 244 and Fl. Ind. II. 429; DC. Prod. III. 12.

Hab. Frequent in the tropical forests of the Andaman islands.

In Andaman Rep. p. 37, I stated that this species hardly differs from the preceding. This is a mistake. The Nicobar species of *Terminalia* which I presumed to be new (Journ. As Soc. Beng. 1876, 130) belongs here.

3. T. Belerica, Roxb. Corom. Pl. II. t. 198 and Fl. Ind. II. 431; DC. Prod. III. 12; WA. Prod. I. 313; Wight Ill. I. t. 91.; Miq. Fl. Ind. Bat. I/1. 600; Bedd. Fl. Sylv. t. 19. (*Myrobalanus belerica*, Gærtn. Fruct.

II. 90. t. 97; Rheed. Hort. Malab. IV. t. 10; *T. fœtidissima*, Griff. Not. Dicot. 685; *T. laurinoides*, T. and B. in Miq. Fl. Ind. Bat. I/1. 600).

Hab. Frequent in the mixed forests up to 2000 ft. elevation, all over Burma and the adjacent provinces.—Fl. Apr. May; Fr. CS.

4. T. CHEBULA, Retz. Obs. V. 31; Roxb. Corom. Pl. II. t. 197 and Fl. Ind. II. 435; DC. Prod. III. 13; WA. Prod. I. 313; Miq. Fl. Ind. Bat. I/1. 601; Brand. For. Fl. t. 29.; Bedd. Fl. Sylv. t. 27. (*T. reticulata*, Roth. Nov. sp. 381; DC. l. c.).

Hab. Chittagong.

5. T. TOMENTELLA, Kurz in Journ. As. Soc. Beng. 1873. 80.

Hab. Frequent in the upper mixed and the low forests, all over Pegu and Martaban down to Tenasserim.—Fl. June; Fr. CS.

6. T. CITRINA, Roxb. Fl. Ind. II. 435; DC. Prod. III. 12; Miq. Fl. Ind. Bat. I/1. 602. (*Myrobalanus citrina*, Gærtn. Fruct. II. 91. t. 97).

Hab. Not unfrequent in the tropical forests of the Andamans; Tenasserim (Helf. 2178).—Fr. CS.

7. T. BIALATA, Wall. ap. Voigt. Cat. Suburb. Calc. 36 (*Pentaptera bialata*, Roxb. Fl. Ind. II. 441; DC. Prod. III. 15).

Hab. Not uncommon in the upper mixed forests of the Andamans.—Fl. RS.

8. T. PYRIFOLIA, (*Pentaptera pyrifolia*, Presl. Epim. Bot. 214; Walp. Ann. III. 859; *T. Javanica*, Miq. Fl. Ind. Bat. I/1. 602 ?)

Hab. Frequent in the mixed forests, especially the upper ones, all over Pegu and Martaban down to Tenasserim.—Fl. HS.; Fr. CS.

9. T. MYRIOCARPA, v. Heurck and Muell. Arg. Obs. Bot. 215.

Hab. Ava, Khakyen hills east of Bhamo (J. Anderson).—Fr. March.

10. T. ALATA, Roth. Nov. sp. 379; Miq. Fl. Ind. Bat. I/1. 603.—(*Pentaptera tomentosa*, Roxb. Fl. Ind. II. 440; DC. Prod. III. 14; *T. tomentosa*, WA. Prod. I. 314; Wight Icon. t. 195; Bedd. Fl. Sylv. t. 17; *T. elliptica*, Willd. sp. pl. IV. 969 ?).

Hab. Frequent in the lower mixed and the open forests, all over Pegu and Martaban.—Fl. HS.; Fr. CS.

11. T. CRENULATA, Roth. Nov. sp. 380; Miq. Fl. Ind. Bat. I/1. 603. (*Pentaptera glabra*, Roxb. Fl. Ind. II. 440; *T. glabra*, WA. Prod. I. 314; *Pentaptera obovata* and *P. crenulata*, DC. Prod. III. 14 and 15).

Hab. Not unfrequent in the upper mixed forests of the Pegu Yomah and Arracan.—Fr. CS.

12. T. MACROCARPA, (*Pentaptera macrocarpa*, Wall. Cat. 3982).

Hab. Frequent in the upper-mixed and the open forests, all over Pegu and Martaban down to Upper Tenasserim.—Fl. H. S.; Fr. CS.

Doubtful Species.

1. *Pentaptera gracilis*, Presl. Epim. 214; Walp. Ann. III. 859.

Hab. Upper Tenasserim, near Moulmein.

The leaves are described as whorled by threes, indicating a species of *Combretum* rather than of *Terminalia*.

Combretum, L.

Conspectus of Species.

Subg. I. Poivrea, Comm. Flowers 5-merous. Stamens 10, all equal or alternately shorter. Fruits usually 5-, rarely 4- or 6- or 8-cornered or -winged.

* *Calyx funnel-cup-shaped.*

× Petals none.

Leaves only 1½—3 in. long; panicles greyish velvety, the floral leaves not discoloured, .. *C. apetalum.*

× × Petals present.

Leaves large, opposite; panicles rusty or tawny tomentose, the floral leaves white-discoloured; fruits with 5 chartaceous wings, ... *C. decandrum.*

Leaves often whorled by 2—4, smooth, coriaceous; panicles greyish tomentose without floral leaves; fruits with 5 sharp thick almost wing-like corners, ... *C. trifoliatum.*

Similar to the preceding, but leaves strongly nerved and net-veined; fruits sharply 4-cornered, ... *C. tetragonocarpum.*

* * *Calyx-tube tubular, the limb abruptly salver- or cup-shaped.*

Racemes, petioles, and branchlets greyish or rusty puberulous or velvety, ... *C. ovale.*

Panicles, petioles, and branchlets all rusty pilose; fruits 5-winged, puberulous, .. *C. pilosum.*

Subg. II. Combretum, DC. Flowers 4-merous. Stamens 8, equal or alternately shorter. Fruits usually 4-, rarely 5-winged or -cornered.

* *Calyx shorter or longer tubular-bell-shaped* (*the limb never abruptly cupular*). *Fruits winged, the wings chartaceous and broader than the diameter of the nut.*

× Flowers shortly pedicelled.

All parts glabrous, the leaves opposite; inflorescence and flowers velvety, *C. extensum.*

× × Flowers all sessile.

All younger parts, the inflorescence, and leaves beneath coppery or rusty lepidote; leaves large, opposite, ... *C. squamosum,*

Leaves usually whorled in threes (at least in the older branchlets), glabrous, when young minutely lepidote; inflorescence and young shoots puberulous, ... *C. Chinense.*

As preceding, but branchlets, petioles, and inflorescence all rusty tomentose; leaves more or less pubescent beneath, never lepidote, ... *C. dasystachyum.*

* * *Calyx funnel-cup-shaped. Fruits winged or angular.*

× Fruits 4- or 5-winged, the wings chartaceous. Leaves and fruits small.

† Nuts smooth and glabrous.

Young shoots rusty pubescent, the leaves and the 4- or 5-winged fruits glabrous; branchlets terete, ... *C. pyrifolium,*

All parts, also the 4-winged fruits, more or less silvery lepidote; branchlets 4-cornered. .. *C. quadrangulare.*

† † Nuts fibrillose-hirsute.

Leaves beneath resinose-dotted; inflorescence brown-lepidote; young shoots pubescent, .. *C. Wallichii.*

× × Fruits 4-cornered, the angles thick and rounded.

Inflorescence and young branchlets rusty puberous, the former also lepidote; leaves large, strongly nerved, and parallel-veined, ... *C. costatum.*

1. C. APETALUM, Wall. Cat. 3990.

HAB. Common in the dry forests of the Prome District; Ava, along the Irrawaddi from Segain southwards.—Fl. Sept.—Jan.; Fr. March.

2. C. DECANDRUM, Roxb. Corom, Pl. I. t. 59 and Fl. Ind. II. 232, non Jacq.; G. Don. in Linn. Trans. XV. 437 (*Poivrea Roxburghii*, DC. Prod. III. 18; WA. Prod. I. 317).

HAB. Common in all forests, especially the tropical ones, up to 3000 ft. elevation, all over Burma and adjoining provinces.—Fl. Nov.—Febr.

3. C. TRIFOLIATUM, Vent. Choix d. pl. 58. t. 58; Miq. Fl. Ind. Bat. I/1. 610; G. Don. in. Linn. Trans. XV. 439. (*Terminalia lancifolia*, Griff. Not. Dicot. 685. t. 644. f. 4; *Embryogonia lucida*, Bl. Mus. Lugd. Bat. II. t. 52).

HAB. Frequent in the swamp-forests of the alluvial lands all over Burma, from Ava down to Tenasserim.—Fl. Jan.—March; Fr. Apr. June.

4. C. TETRAGONOCARPUM, Kurz in Journ. As. Soc. Beng. 1872. 306.

HAB. Frequent in the swamp-forests of the alluvial lands of Pegu. —Fl. Febr. March; Fr. May, June.

5. C. OVALE, R. Br. in App. to Salt's Trav. in Abyss.; G. Don. in Linn. Trans. XV. 434.

HAB. Not unfrequent in the tropical and mixed forests of the Pegu Yomah; also in shrubbery etc. of Martaban east of Tounghoo.—Fl. March to May.

Possibly only a variety of the following species.

6. C. PILOSUM, Roxb. Fl. Ind. II. 231; G. Don in Linn. Trans. XV. 434.—(*Poivrea pilosa*, WA. Prod. I. 317 in adn.; C. sp. Griff. Not. Dicot. 683 ?).

HAB. Pegu, Rangoon (Cleghorn); Tenasserim, from Moulmein (Falconer) to Mergui (Griff.); Ava, Kakhyen hills (J. Anderson).—Fl. Jan.

7. C. EXTENSUM, Roxb. Hort. Beng. 28 and Fl. Ind. II. 229; G. Don. in Linn. Trans. XV. 422?; Miq. Fl. Ind. Bat. I/1. 608. (*C. rotundifolium*, Roxb. Fl. Ind. II. 39, non Rich.; *C. Horsfieldii*, Miq. Fl. Ind. Bat. I/1. 609; *C. platyphyllum*, Heurck and Muell. Arg. Obs. bot. 1871. 243; *C. formosum*, Griff. Not. Dicot. 682).

HAB. Frequent in all leaf-shedding forests, especially along the larger rivers, all over Burma and the adjoining provinces.—Fl. Jan.—March; Fr. May.

8. C. SQUAMOSUM, Roxb. Fl. Ind. II. 231; Miq. Fl. Ind. Bat. I/1. 607; G. Don in Linn. Trans. XV. 438. (*C. lepidotum*, Presl Bot. Bemerk. 142; Walp. Ann. I. 290).

Hab. Frequent in the lower mixed and the open forests, especially the low ones, all over Pegu and from Martaban down to Tenasserim.—Fl. March, Apr. and Nov.; Fr. CS. and May, June.

A variety, or rather sport, from Prome (J. Anderson) with abnormal much bracted inflorescences, has all the scales developed into yellowish hairs, so as to appear hirsute all over. *C. punctatum*, Bl., differs not only by the very short obovate petals, but also in the inflorescence, shape of leaves, and the smaller fruits.

9. C. Chinense, Roxb. Fl. Ind. II. 230; G. Don. in Linn. Trans. XV. 432? (*C. ternatum*, Wall. Cat. 4002; *C. Griffithii*, Heurck and Muell. Arg. Obs. bot. 231).

Hab. Not unfrequent in the tropical forests of the Martaban hills, east of Tounghoo, up 3000 ft. elevation; Chittagong.—Fr. March, Apr.

Don's *C. Chinense* is unknown to me and may possibly be the same as *C. squamosum*, Roxb., but the petals are apparently different.

10. C. dasystachyum, Kurz in Journ. As. Soc. Beng. 1874. 187.

Hab. Not unfrequent in the tropical forests, especially along choungs, along the eastern slopes of the Pegu Yomah and of Martaban.—Fl. March, Apr.

11. C. pyrifolium, Kurz in Journ. As. Soc. Beng. 1874. 188 (*Pentaptera pyrifolia*, Wall. Cat. 3985, non Presl).

Hab. Ava, on Taong-dong (Wall.); near Mandalay (J. Anderson).—Fr. Sept.—Nov.

12. C. quadrangulare, Kurz in Journ. As. Soc. Beng. 1874. 188.

Hab. Tenasserim (Helf. 2181).—Fl. Apr., May.

Judging from the description only, I do not think that this species may be compared with *C. stelligerum* of Presl.

13. C. Wallichii, DC. Prod. III. 21.

Hab. Tropical forests of Chittagong; Ava, Khakyen hills.—Fl. RS.; Fr. CS.

14. C. costatum, Roxb. Fl. Ind. II. 227.

Hab. Martaban to Tenasserim (Falconer, Brandis).—Fr. HS.

Doubtful Species.

C. stelligerum, Presl. Epim. 215; Walp. Ann. III. 860.

Hab. Tenasserim, near Moulmein (Helf.).

Anogeissus, Wall.

Conspectus of Species.

* *Beak as long as or longer than the nut.*

Leaves oval to ovate-lanceolate, retuse or blunt, glabrous; flower-heads several together on a branched peduncle,.. ..... *A. latifolia.*

Leaves acuminate, pubescent at least when young; flower-heads solitary on a simple peduncle, $\frac{1}{2}$—$\frac{3}{4}$ in. across, ... *A. acuminata.*

* * *Beak shorter than the nut.*

Leaves obovate; flower-heads $\frac{1}{4}$ in. across, solitary on a simple peduncle,.. *A. pendula.*

1. A. ACUMINATA, Wall. Cat. 4014; Walp. Rep. II. 63; Bedd. Fl. Sylv. t. 16. (*Conocarpus acuminatus*, Roxb. Fl. Ind. II. 443; DC. Prod. III. 17; WA. Prod. I. 316; DC. in Mém. d. Génèv. IV. 35. t. 3).

Var. *α.* GENUINA, ovary and style villous; fruits and the beak more or less pubescent.

Var. *β.* PHILLYREÆFOLIA, (*A. phillyreæfolia*, Heurck and Muell. Arg. Obs. Bot. 209), ovary and style minutely appressed-pubescent; fruits and beak glabrous or nearly so.

HAB. Var. *α.* frequent in the mixed (especially the upper ones) and also in tropical forests, from Chittagong and Martaban down to Tenasserim, up to 3000 ft. elevation; var. *β.* restricted to the alluvial plains of Ava, Prome, and Pegu, chiefly in the swamp-forests.—Fl. Febr., March; Fr. Apr., May.

This tree is remarkable by the bark, which consists of herbaceous green tubercles covered with a smooth grey epidermis which is easily scraped off. By this mark the tree can be recognised from all others in Burma, but in the plains (the var. *β.*) the bark becomes white marmorate and conchoid (as in *Emblica officinalis*). I should certainly have specifically separated this swamp variety had I not met with trees that bore both kinds of bark.

Quisqualis, L.

1. Q. INDICA, L. sp. pl. 556; Bot. Mag. t. 2033; Bot. Reg. t. 492; DC. Prod. III. 23; Roxb. Fl. Ind. II. 427; Wight Illust. I. t. 92; Miq. Fl. Ind. Bat. I/1. 610; Griff. Not. Dicot. 683 (*Q. longiflora*, Presl. Epim. 216; Walp. Ann. II. 860).

Var. *α.* GENUINA, bracts leafy, from ovate and lanceolate to linear-lanceolate; petals oblong or elliptically oblong, blunt or nearly so.

Var. *β.* VILLOSA, (*Q. villosa*, Roxb. Fl. Ind. II. 426; DC. Prod. III. 23), bracts subulate to linear, small and inconspicuous; petals usually obovate and often almost notched.

Var. *γ.* OXYPETALA, as preceding, but the petals broadly lanceolate and acute or nearly so.

HAB. Not unfrequent in the tropical and lower mixed forests from Ava and Pegu down to Tenasserim; var. *γ.* Ava, Khakyen hills east of Bhamo (J. Anderson).—Fl. March to May.

Calycopteris, Lamk.

Conspectus of Species.

Leaves pubescent, rarely almost glabrous; longer stamens $\frac{1}{4}$—$\frac{1}{3}$ as long as the acute calyx-lobes, ... *C. nutans.*
Leaves glabrous; longer stamens as long as the long bluntish calyx-lobes, *C. floribunda.*

1. C. NUTANS. (*Getonia nutans*, Roxb. Fl. Ind. II. 428; DC. Prod. III. 15; *Getonia floribunda*, WA. Prod. I. 315, non Roxb.).

Var. *α.* ROXBURGHII, leaves ovate-oblong to ovate-lanceolate, the larger ones 5—6 in. long, firmly chartaceous, more or less rusty or tawny pubescent beneath.

Var. *β.* GLABRIUSCULA, the larger leaves 3—4 in. long, oblong to ovate-oblong, thin chartaceous, nearly glabrous.

HAB. Frequent in the mixed forests, shrubbery, along bushy river-sides, &c., also in the savannahs, from the plains up to 2,000 ft. elevation and higher; all over Prome, Pegu and Martaban down to Tenasserim.—Fl. Jan.—March; Fr. Febr.—May.

Wight and Arnott state that *C. nutans* with short stamens does not occur in Hindustan, but all the specimens which I have seen from there belong to *C. nutans*, none to *C. floribunda*, Lamk. (*Getonia nutans*, Roxb. Corom. Pl. I. 61. t. 87 ?).

Lumnitzera, Willd.

Conspectus of Species.

Flowers white; stamens 10, about as long as the petals, ... *L. racemosa.*
Flowers crimson; stamens 5—10, twice as long as the petals, ... *L. littorea.*

1. L. RACEMOSA, Willd. Nov. Act. Nat. Cur. Berol. IV. 186; DC. Prod. III. 22; WA. Prod. I. 316; Miq. Fl. Ind. Bat. I/1. 606. (*Petaloma alternifolia*, Roxb. Fl. Ind. II. 372; Rheed. Hort. Malab. VI. t. 37).

HAB. Frequent along tidal channels, &c., of the beach-forests, also in the tidal forests, all along the coasts from Arracan down to Tenasserim and the Andamans.—Fl. HS.

2. L. LITTOREA, Voigt Cat. Hort. Calc. 39. (*Pyrranthus littoreus*, Jack Mal. Misc. II. 57; *L. coccinea*, WA. Prod. I. 316; Miq. Fl. Ind. Bat. I/1. 606; *L. pentandra*, Griff. Not. Dicot. 684).

HAB. Tenasserim, in the mangrove jungles of Mergui (Griff.).—Fl. Fr. Sept.

Illigera, Bl.

1. I. APPENDICULATA, Bl. Bydr. 1153; Miq. Fl. Ind. Bat. I/1. 1094; DC. Prod. XV/1. 251. (*I. Coryzadenia*, Meisn. in DC. Prod. XV/1. 251; *Coryzadenia trifoliata*, Griff. Not. Dicot. 356 ?).

Hab. Frequent in the tropical forests of the Pegu Yomah and from Martaban down to Tenasserim and the Andamans.—Fl. Octob.; Fr. March, Apr.

Gyrocarpus, Jacq.

1. G. Americanus, Jacq. Amer. 282. t. 178. f. 80; DC. Prod. XV/1. 247. (*G. Jacquini*, Roxb. Corom. Pl. I. 2. t. 1 and Fl. Ind. I. 445; Bth. Fl. Austr. II. 506; Bedd. Fl. Sylv. t. 196; *G. Asiaticus*, Willd. sp. pl. IV. 982; DC. l. c.; *G. acuminatus*, Meisn. in DC. l. c.; *G. sphenopterus* and *G. rugosus*, R. Br. Prod. Nov. Holl. 405; DC. l. c.).

Hab. Not unfrequent in the coast-forests of the Andamans and Tenasserim.—Fl. RS.; Fr. CS.

MYRTACEÆ.

Conspectus of Genera.

Trib. I. LEPTOSPERMEÆ. Ovary 2—5- rarely more-celled. Fruit a capsule, either opening at the summit in as many valves as there are cells, or very rarely indehiscent.

* *Stamens in a single row, free.*

Bæckea. Stamens usually fewer than 20. Flowers small. Leaves opposite, narrow.

Leptospermum. Stamens numerous, in a continuous row. Flowers solitary or crowded. Leaves alternating.

* * *Stamens united into 5 separate bundles.*

Melaleuca. Staminal bundles alternating with the petals. Flowers in heads or spikes. Leaves alternating.

Tristania. Staminal bundles opposite the petals. Flowers in cymes or corymbs. Leaves broad, alternate, rarely opposite.

Trib. II. MYRTEÆ. Ovary 2- or more-celled. Fruit an indehiscent berry or drupe very rarely opening by an apical opercle.

Subtr. I. EU-MYRTEÆ. Leaves opposite, dotted.

× Stigma peltate or capitate. Testa of seeds hard. Cotyledons small.

\+ Ovules 2—6 in each cell.

Decaspermum. Ovary 5- or rarely 4-celled. Embryo long and narrow, curved, circular or spiral.

\+ \+ Ovules numerous, in 2 or more series.

Rhodamnia. Ovary 1-celled, with 2 parietal placentas. Leaves 3-nerved.

Rhodomyrtus. Ovary 1-, 2-, or 3-celled, with 2 rows of superposed ovules in each cell and the ovules separated by transverse septa. Leaves sometimes 3-nerved.

Psidium. Ovary 2—7 (usually 4—5)-celled, the placentas often 2-lamellate. Leaves penni-nerved.

× × Stigma simple, minute. Testa of seed membranous.

Eugenia. Ovary 2—3-celled, with several ovules in each cell. Embryo thick and fleshy, either indivisible or with 2 thick fleshy cotyledons, the radicle short. Flowers 4- rarely 5-merous, solitary or in cymes or panicles. Leaves penni-nerved.

Subtr. II. LECYTHIDEÆ. Leaves alternate, not dotted. Calyx nearly valvate, rarely imbricate.

Barringtonia. Stamens all perfect. Ovary 2- or 4-celled, with numerous ovules in each cell. Fruit fibrous or fleshy, often angular, 1- or very rarely 2—4-seeded.

Careya. Outer or inner series, or both, without anthers. Fruit globose to ovoid, many-seeded, the seeds imbedded in pulp. Ovary 4-celled.

Melaleuca, L.

1. M. leucadendron, L. Mant. 105: DC. Prod. III. 212; Roxb. Fl. Ind. III. 397; Bth. Fl. Austr. III. 142. (*M. Cajaputi*, Roxb. Fl. Ind. III: 394; *M. minor*, Sm. in Rees Cycl. V. 23. No. 2; DC. Prod. III. 212).

Hab. Tenasserim, Mergui, rare (Griff.).

Tristania, R. Br.

Conspectus of Species.

* *Calyx-lobes blunt or almost so.*

Leaves sessile or nearly so, rigidly coriaceous, glossy on both sides; flowers sessile or nearly so; calyx about 3 lin. across, ... *T. Merguensis.*

Leaves petioled, thin coriaceous, opaque beneath; flowers pedicelled; calyx only $1\frac{1}{2}$ lin. across; capsule exserted, ... *T. Burmanica.*

* * *Calyx-lobes subulate-acuminate.*

Leaves crowded, narrowed at both ends; flowers rather large; capsule hardly exserted, .. *T. Griffithii.*

1. T. Merguensis, Griff. in Journ. As. Soc. Beng. 1854. 637 (*T. affinis*, Griff. Not. Dicot. 650. t. 636. f. 3).

Hab. Tenasserim, Mergui, along the coast (Griff. and Helf. 2341). —Fl. Aug.

2. T. Burmanica, Griff. in Journ. As. Soc. Beng. 1854. 637.—(*T. sp.* Griff. Not. Dicot. 648 ?)

Hab. Not unfrequent in the eng- and hill-eng-forests, from Martaban down to Tenasserim, also ascending into the drier hill-forests up to 4000 ft. elevation; according to Dr. Brandis also in the Pegu Yomah. —Fl. March, Apr.; Fr. Apr., May.

3. T. Griffithii, (*T. conferta*, Griff. Not. Dicot. 649, vix R. Br.).

Hab. Tenasserim, Mergui (Griff.)—Fl. Fr. Jan.

Decaspermum, Forst.

1. D. paniculatum, (*Nelitris paniculata*, Ldl. Collect. sub No. 16; DC. Prod. III. 231; Wight Icon. t. 521; *Eugenia polygama*, Roxb. Fl. Ind. II. 491; *N. polygama*, Bl. Mus. Lugd. Bat. I. 75; Miq. Fl. Ind. Bat. I. 474; *N. pallescens*, Miq. Suppl. Fl. Sumatr. 314).

Var. *α.* genuina, pedicels longer, calyx-lobes 5, more equal and usually somewhat acute; flowers in simple rarely branched racemes.

Var. *β.* thyrsoidea, (*N. paniculata*, Wall. Cat. 3627), pedicels shorter, sometimes very short; calyx-lobes 4, usually unequal, more or less rounded; flowers somewhat smaller, often in thyrsoid racemes.

Hab. Var. *α.* very frequent in the drier hill-forests of Martaban and Tenasserim, freely springing up in toungyas, at 3000 to 4000 ft. elevation.—Fl. March.

Rhodamnia, Jack.

1. R. trinervia, Bl. Mus. Lugd. Bat. I. 79; Bth. Fl. Austr. III. 278. (*Myrtus trinervia*, Sm. in Linn. Trans. III. 280; *Eugenia? trinervia*, DC. Prod. III. 279; Bot. Mag. t. 3223).

Var. *α.* concolor, (*Rhodamnia cinerea*, Griff. Not. Dicot. 653, non Jack; *R. concolor*, Miq. Suppl. Fl. Sumatr. 315; *R. trinervia*, Bl. l. c.), leaves green on both sides, beneath thinly and minutely puberulous or almost glabrescent; flowers usually by 4—7, but also fewer or solitary.

Var. *β.* spectabilis (*R. spectabilis*, Bl. Mus. Bot. Lugd. Bat. I. 78; Miq. l. c. 479; *R. cinerea*, Jack Mal. Misc. II. 48; *Monoxora spectabilis*, Wight Icon. t. 524; *R. Nageli*, Miq. l. c. 478; *R. subtriflora*, Bl. Mus. Lugd. Bat. I. 79; Miq. l. c. 479; *R. Muelleri*, Bl. l. c.; Miq. l. c.), leaves beneath covered with a close minute silvery white pubescence, turning sometimes greyish when old; flowers usually fewer, or only 2 or solitary in the leaf-axils.

Hab. Var. *α.* Tenasserim, from Moulmein down to Mergui (Falconer, Helf. 2344; Griff. 2344; Wall. etc.)—Fl. Aug.

Psidium, L.

*1. P. Guyava, L. sp. pl. 470; Bth. Fl. Hongk. 120.

Var. *α.* pyriferum, (*P. pyriferum*, L. sp. pl. 672; DC. Prod. III. 233; Roxb. Fl. Ind. II. 480; Bot. Reg. t. 1079; Rheed. Hort. Mal. III. t. 34), peduncles 1-flowered; fruits pear-shaped.

Var. *β.* pomiferum, (*P. pomiferum*, L. sp. pl. 672; DC. l. c. 234; Roxb. l. c.; Rheed. Hort. Malab. III. t. 48), peduncles usually 2-flowered, with a third flower in the axil of the forking; fruits globular or ovoid.

Hab. Now generally cultivated all over the country, and often as wild in village-woods.—Fl. Apr., May; Fr. RS.

Eugenia, L.

Conspectus of Species.

Subg. I. Syzygium, Gærtn. Calyx smooth inside, without intrastaminal thickened ring. Calyx-limb often obsolete and turning truncate after defloration. Petals free or often cohering in a deciduous calyptra. Flowers usually small. Berries often small, globular to ovoid and cylindrical, more or less sappy, 1- rarely 2-seeded.

* *Calyx elongate and cylindrical, or shorter and obversely conical.*—(Acmena, Wight).

× Flowers in simple or almost simple axillary racemes sometimes much reduced. Calyx much elongate. Berries ovoid.

Calyx tubular-narrowed, 1—½ in. long, the lobes broad and rounded; berries about an inch long, ovoid-oblong, crowned by the calyx-lobes, ... *E. claviflora.*

Calyx club-shaped, ⅓—½ in. long, the limb truncate; berry clavate-oblong, only ⅓—½ in. long, crowned by the cup-shaped truncate calyx-limb, ... *E. leptantha.*

× × Flowers in more or less corymb-like axillary and terminal panicles. Calyx more or less obconical.

\+ Calyx at base pedicel-like contracted.

Calyx smooth; leaves somewhat glaucous and rather opaque beneath; berries black, .. *E. grata.*

Calyx (dried) granular-rough; leaves rather glossy beneath; berries white, .. *E. Zeylanica.*

\+ + Calyx sessile, not narrowed pedicel-like at base.

Leaves more or less linear, net-veined between the remote indistinct irregular lateral nerves; shrub, ... *E. contracta.*

Leaves more or less oblong, somewhat glaucescent beneath, not net-veined between the close-set parallel lateral nerves; tree, ... *E. bracteolata.*

* * *Calyx hemispherical to funnel-shaped, sessile or contracted pedicel-like at the base.*

× Leaves usually opaque, green, the lateral nerves more or less distant, somewhat irregular, net-veined between. Inflorescence usually lateral from the older branches.

\+ Calyx sessile, not tapering pedicel-like at the base.

† Leaves green on both sides.

Petiole ½—⅔ in. long; leaves broader, not decurrent; flowers more than 3 together; panicle longer peduncled, the last ramifications very short, ... *E. operculata.*

As preceding, but leaves more obovate; panicle very short peduncled or almost sessile, more lax; flowers often by threes, ... *E. obovata.*

Leaves acuminately decurrent on a short petiole, more acuminate, ... *E. Paniala.*

† † Leaves glaucous or glaucescent beneath.

Branchlets terete or nearly so; panicles more or less peduncled; calyx soon truncate, the lobes obsolete, ... *E. cinerea.*

\+ + Calyx narrowed into a longer or shorter pedicel-like base. Panicle short, sessile or nearly so, usually branched already from the base.

† Calyx-lobes well-developed, up to ½ line long.

Similar to *E. cinerea*, the branchlets greyish; calyx-lobes ⅓ lin. long, ... *E. præcox.*

Branchlets brownish; racemes sometimes corymb-like, slender, short, ... *E. cerasoides.*

† † Calyx soon truncate, the lobes obsolete.

Branchlets brown, 4-cornered, often wingedly so especially while young... *E. tetragona.*

Branchlets white, terete; panicles cyme-like, short, ... *E. balsamea.*

× × Leaves usually glossy, often drying blackish or brownish, the lateral nerves all thin and vein-like, more or less crowdedly parallel-running.

\+ Calyx narrowed into a longer or shorter pedicel-like base.

† Inflorescence lateral from the older branchlets.

Calyx a line long, almost sessile; ramifications of panicle sharply 4-cornered; berries ovoid, the size of a pea; branchlets brownish, ... *E. fruticosa.*

Calyx 2 lin. long, tapering into a thick pedicel-like base; ramifications of the panicle obsoletely 4-cornered; berries ovoid-oblong, ½ in. long; branchlets white, .. *E. Jambolana.*

† † Inflorescence terminal (and often also axillary on the same branch).

‡ Branchlets brown.

O Leaves bluntish acuminate to blunt.

Leaves thin coriaceous, the lateral nerves thin but distinct; petiole 3 lin. long, slender, .. *E. cymosa.*

Leaves firmly coriaceous, the lateral nerves obsolete; petiole thick, not above a line long, ... *E. myrtifolia.*

O O Leaves long and sharply acuminate.

Leaves almost chartaceous, pale coloured beneath; petiole about 2 lin. long, .. *E. acuminatissima.*

‡ ‡ Branchlets white.

Leaves bluntish acuminate, almost chartaceous, elegantly tranversely veined, .. *E. venusta.*

+ + Calyx not or scarcely contracted at the base, sessile. Leaves blackish or reddish in drying.

† Branchlets white.

Leaves chartaceous; calyx-lobes about a line long; petals 2 lin. long or longer; filaments 4—5 lin. long, ... *E. rubens.*

Leaves coriaceous, the lateral nerves strong and prominent; calyx-lobes and petals shorter; filaments 2—3 lin. long; berries obovoid, ... *E. Thumra.*

† † Branchlets red-brown.

Like preceding, but lateral nerves thin and vein-like; berries almost globular, the size of a large cherry, ... *E. oblata.*

Subg. II. Jambosa, DC. Calyx inside usually with a circular or 4-angular intra-staminal ring, or the stamens inserted on the thickened ring itself; flowers often large; calyx-lobes conspicuous and persistent. Berries usually large, more or less turbinate or ovoid, the endocarp thick and fleshy. Seeds large.

* *Calyx-lobes in fruit spreading.*

× Calyx less than ½ in. long.

+ Flowers sessile. Flowers in terminal and often also in axillary panicles.

† Leaves glossy, firmly coriaceous, the lateral nerves thin and parallel.

Leaves 5—6 in. long, blunt or nearly so; panicle corymb-like, peduncled; berry obovoid-pear-shaped, about an in. long, ... *E. grandis.*

Leaves only 2—3 in. long, decurrent at the base, bluntish acuminate, .. *E. lepidocarpa.*

Leaves cuneate at the base; panicles sessile, reduced and cluster-like, the ramifications very short and thick, joint-like, ... *E. pachyphylla.*

† † Leaves opaque, coriaceous, the lateral nerves curved and distant.

Leaves long-petioled; panicle terminal, corymb-like, ... *E. tristis.*

+ + Flowers pedicelled. Leaves more or less chartaceous, the lateral nerves curved.

Panicles axillary and terminal; calyx-base thick, pedicel-like, the true pedicel very short or almost wanting; leaves thin coriaceous, ... *E. lanceæfolia.*

Panicle almost corymb-like, little branched from the base; calyx-base clavate-narrowed, the true pedicel 3—6 lin. long; leaves coriaceous, ... *E. albiflora.*

Racemes simple, slender, lateral or axillary; calyx-base filiform and pedicel-like, the true pedicels long and filiform; leaves membranous, ... *E. Kurzii.*

× × Calyx an inch long or longer.

Leaves large, almost sessile, cordate or rounded at the base; corymbs lateral and terminal, ... *E. formosa.*

* * *Calyx-lobes in fruit incurved or inflexed.*

× Flowers sessile or nearly so.

Leaves cordate or rounded at the base, the petiole very short and thick; corymbs terminal, ... *E. macrocarpa.*

Leaves sessile with a cordate base, blunt; branchlets white, terete; corymbs small, lateral, ... *R. amplexicaulis.*

Leaves acuminate at both ends; panicle cluster-like reduced and lateral, .. *E. Malaccensis.*

× × Flowers truly or spuriously pedicelled.

\+ Leaves opposite.

† Leaves rounded at the base. Fruits obversely turbinate, waxy, white or rose-coloured.

Branchlets usually 4-cornered and often wingedly so, white or pale rose-coloured; leaves acuminate, the intramarginal nerve as strong as the lateral nerves themselves, .. *E. aquea.*

Branchlets terete, brown; leaves bluntish, the intramarginal nerve faint and obscure, .. *E. Javanica.*

† † Leaves narrow, acute at the base, petioled.

Berries almost globular or ovoid, dull-yellow, ... *E. Jambos.*

\+ + Leaves whorled by threes, narrow, obtuse at the base.

Leaves linear or linear-lanceolate, almost sessile; petals 4—16, ... *E. polypetala.*

1. E. CLAVIFLORA, Roxb. Fl. Ind. II. 488; Wight Icon. t. 606.

HAB. Not unfrequent in the tropical forests of the Andamans; also Tenasserim and Chittagong.—Fr. Febr.

2. E. LEPTANTHA, Wight Ill. II. 15 and Icon. t. 528. (*Syzygium* sp., Griff. Not. Dicot. 654).

HAB. Frequent in the tropical forests along the eastern and southern slopes of the Pegu Yomah, and from Tenasserim to the Andamans.—Fl. Febr.; Fr. Apr., May.

3. E. GRATA, Wall. Cat. 3586; Wight Ill. II. 15.

HAB. Tenasserim, apparently frequent.—Fl. Jan., March.

4. E. ZEYLANICA, Wight Ill. II. 14. and Icon. t. 73, non Roxb.; Bedd. Fl. Sylv. t. 202. (*Jambosa bracteata*, Miq. Fl. Ind. Bat. I. 437).

HAB. Not unfrequent in the tropical forests of the Andamans; also Tenasserim.—Fl. HS.

5. E. CONTRACTA, Wall. Cat. 3602.

HAB. Frequent in the stony or rocky bed of choungs in tropical forests, from Martaban down to Tenasserim.—Fl. March, Apr.

The Martaban specimens dry blackish and have the net-venation less prominent. They may possibly form a large and long-leaved variety of *E. cuneata*, Wall. Cat. 3598.

Another species from Tenasserim (Helf. 2407), near allied to the above, has larger leaves of a thinner texture and very lax net-venation. It is no doubt new, but the inflorescences are too young for description. It has white, while the above has red-brown bark.

6. E. BRACTEOLATA, Wight Ill. II. 15 and Icon. t. 531.

HAB. Tenasserim (Griff., Helf.).

7. E. OPERCULATA, Roxb. Hort. Beng. 37 and Fl. Ind. II. 486; Wight Icon. t. 552. (*Syzygium nervosum*, DC. Prod. III. 260; Bth. Fl. Hongk. 119).

HAB. Not unfrequent in the swamp-forests of Pegu, Martaban, and Upper Tenasserim.

8. E. OBOVATA, Wall. Cat. 3352. A. (*Syzygium polyanthum*, Thw. Ceyl. Pl. 116 and 417).

HAB. Ava (Griff. 2403); hills east of Bhamo (J. Anderson).

9. E. PANIALA, Roxb. Fl. Ind. II. 489; Wight Icon. t. 616.

HAB. Chittagong.—Fl. Apr.; Fr. June.

10. E. CINEREA, Wall. Cat. 3576.

HAB. Rare in the tropical forests of the Pegu Yomah (southern parts); Tenasserim, from Moulmein down to Mergui.—Fl. Apr.; Fr. Febr.

Possibly not different from the following species, which I know only from Roxburgh's description and figure.

11. E. PRÆCOX, Roxb. Fl. Ind. II. 488; Wight Icon. t. 619.

HAB. Hilly parts of Chittagong (Roxb.).—Fl. Jan.

12. E. CERASOIDES, Roxb. Fl. Ind. II. 488; Wight Icon. t. 615 (*Syzygium subnodosum*, Miq. Suppl. Fl. Sumatr. 313; *E. polyantha*, Wight Ill. II. 17 and Icon. t. 543).

Var. β. ANGUSTIFOLIA, leaves on shorter and thicker petioles, linear to oblanceolate-linear, with fewer more remote and arcuate nerves; panicles shorter and stouter, the ultimate branchings much reduced; the pedicel-like base of calyx shorter; berries the size of a pepper-kernel, globose, almost sessile, crowned by the truncate calyx-limb.—Probably a distinct species.

HAB. Chittagong; Tenasserim, from Moulmein down to Mergui (Griff., Helf.). Var. β. Ava, Khakyen hills (J. Anderson).—Fr. March.

13. E. TETRAGONA, Wight Ill. II. 16.

HAB. Ava, Khakyen hills east of Bhamo, at 3000—4000 ft. elevation.—Fl. Nov., Decb.

14. E. BALSAMEA, Wight Ill. II. 16.

HAB. Burma (according to Rev. Dr. Mason).

15. E. FRUTICOSA, Roxb. Fl. Ind. II. 487; Wight Icon. t. 624.

HAB. Frequent in the open, chiefly the eng-forests, along the eastern

slopes of the Pegu Yomah, and from Martaban down to Tenasserim; also Chittagong.—Fl. Apr.; Fr. May, June.

16. E. JAMBOLANA, Lamk. Dict. III. 198; Wight Icon. t. 535; Roxb. Fl. Ind. 484; Brand. For. Fl. t. 30; Bedd. Fl. Sylv. t. 197.—(*Syzygium Jambolanum*, DC. Prod. III. 259; Miq. Fl. Ind. Bat. I. 458).

HAB. Frequent in all leaf-shedding forests but chiefly in the mixed ones, rarely entering the tropical forests, from Ava and Martaban down to Tenasserim and the Andamans.—Fl. Apr., May; Fr. May, June.

17. E. CYMOSA, Lamk. Dict. III. 199, non Roxb.; Wight Icon. t. 555. (*E. toddalioides*, Wight Ill. II. 16 and Icon. t. 542; *Syzygium cymosum*, DC. Prod. III. 259; *Jambosa tenuicuspis*, Miq. Fl. Ind. Bat. I. 431; *Syzygium nelitricarpum*, T. et B. in Nat. Tydsch. Ned. Ind. XXV).

HAB. Tenasserim, Tavoy and Mergui.—Fl. Nov.

18. E. MYRTIFOLIA, Roxb. Fl. Ind. II. 490; Wight Icon. t. 618.

HAB. Tenasserim, Moulmein (according to a specimen admixed with Wall. Cat. 3573. A.)

19. E. ACUMINATISSIMA, (*Myrtus acuminatissima*, Bl. Bydr. 1088; *Jambosa acuminatissima*, Hassk. in Flora 1849. 592; Miq. Fl. Ind. Bat. I. 438; *E. ferruginea*, Wight Icon. t. 554).

HAB. Tenasserim (or Andamans ?) (Helf.)

20. E. VENUSTA, Roxb. Fl. Ind. II. 491; Wight Icon. t. 625 (*Syzygium Gardneri*, Thw. Ceyl. Pl. 117 ?)

HAB. Not unfrequent in the tropical forests of Toukyeghat, east of Tounghoo; Tipperah hills (Roxburgh).—Fl. March, Apr.

21. E. RUBENS, Roxb. Fl. Ind. II. 496; Wight Icon. t. 630. (*Jambosa Wightiana*, Bl. Mus. Lugd. Bat. I. 106; Walp. Ann. II. 636).

HAB. Forests of Chittagong (Roxb.); Tenasserim, from Moulmein down to Mergui.—Fl. Febr.—Apr.; Fr. Begin of RS.

If my identification prove correct, then it is only the length of the stamens and a thinner texture of the leaves that separates this species from *E. Thumra*. The petals and sepals, too, are nearly twice the size.

22. E. THUMRA, Roxb. Fl. Ind. II. 495; Wight Icon. t. 617.

HAB. Frequent in the tropical forests, especially in marshy places along choungs, of the Pegu Yomah, and from Martaban down to Tenasserim.—Fl. March, Apr.; Fr. May, June.

23. E. OBLATA, Roxb. Fl. Ind. II. 493; Wight Icon. t. 622.

HAB. Frequent in tropical forests, especially along marshy choungs, from Martaban down to Tenasserim.—Fl. March—May; Fr. June—Aug.

24. E. GRANDIS, Wight Ill. II. 15 and Icon. t. 614 (*E. cymosa*, Roxb. Fl. Ind. II. 492, non Lamk.).

HAB. Frequent in the tropical forests and occasionally in the moister upper mixed forests of the Pegu Yomah, Martaban, and Tenasserim.—Fl. Febr.; Fr. Apr.

25. E. LEPIDOCARPA, Wall. Cat. 3618 in part.—(*Syzygium Palembanicum*, Miq. Suppl. Fl. Sumatr. 313 ?).

HAB. In the eng-forests of Upper Tenasserim (Brandis).

26. E. PACHYPHYLLA, Kurz in Journ. As. Soc. Beng. 1873. 232.

HAB. Upper Tenasserim, Bithoko range, 3000 ft. (Brandis).—Fl. Apr.

27. E. TRISTIS, Kurz in Journ. As. Soc. Beng. 1873. 233.

HAB. In the eng-forests at Lounkim, Tenasserim (Brandis).—Fr. Apr.

28. E. LANCEÆFOLIA, Roxb. Fl. Ind. II. 494; Wight Icon. t. 621.

HAB. Chittagong (Hf. and Th.).—Fl. Nov.; Fr. Febr.

29. E. KURZII, Duthie MS. (*E. cerasiflora*, Kurz in Journ. As. Soc. Beng. 1873. 233, non Miq.).

HAB. Rather rare in the tropical forests of Toukyeghat, east of Tounghoo.—Fl. March.

30. E. ALBIFLORA, Duthie MS.; Kurz For. Fl. Burma I. 491.

HAB. Burma, probably Ava. (Griff. 2419).

31. E. FORMOSA, Wall. Pl. As. rar. II. 6. t. 108 (1831).—(*E. ternifolia*, Roxb. Fl. Ind. II. 489 (1832); Wight Icon. t. 611; *Jambosa formosa*, Wight Ill. II. 14; Miq. Fl. Ind. Bat. I. 412).

HAB. In the tropical forests of Chittagong and Upper Tenasserim.—Fl. Fr. March.

E. formosa, of Wall. Cat. 3609 is a mixture of fruits of this species and leaves of *E. Malaccensis*.

32. E. MACROCARPA, Roxb. Fl. Ind. II. 497; Wight Icon. t. 612. (*Jambosa macrocarpa*, Miq. Fl. Ind. Bat. I. 417.)

HAB. Frequent along choungs in the tropical forests of the eastern slopes of the Pegu Yomah, and from Martaban down to Tenasserim, up to 2000 ft. elevation.—Fl. March, Apr.; Fr. Aug.

33. E. AMPLEXICAULIS, Roxb. Fl. Ind. II. 483; Wight Icon. t. 608.

HAB. Chittagong (Roxb.).

Specimens in Herb. Brandis (Nos. 1225, 1222, and 1223) from the tropical forests of Upper Tenasserim, come nearest to this species. They differ apparently by the sharply 4-angular branchlets and bluntish acuminate or bluntish leaves. The inflorescence is terminal, but otherwise quite agrees with Roxburgh's figure. The shape of the leaves is very variable, some of them almost agreeing with those of *E. aquea*.

*34. E. MALACCENSIS, L. sp. pl. 672; Roxb. Fl. Ind. II. 483; Wight Illust. II. 14. t. 98 (*Jambosa domestica*, Rumph. Herb. Amb. I. 121. t. 37; Miq. Fl. Ind. Bat. I. 411; *Jambosa Malaccensis*, DC. Prod. III. 288; Bot. Mag. t. 4408; *E. purpurea*, Roxb. Fl. Ind. II. 483; Wight Icon. t. 549; Griff. Not. Dicot. 654).

Hab. Planted in villages of Tenasserim.—Fl. HS.

*35. E. aquea, Burm. Fl. Ind. 114; Roxb. Fl. Ind. II. 492; Wight Icon. t. 550. (*Jambosa aquea*, DC. Prod. III. 288; Wight Icon. t. 216; Miq. Fl. Ind. Bat. I. 421).

Hab. Apparently only planted; Chittagong, Ava, Pegu, Martaban, and Tenasserim.—Fl. March, Apr.; Fr. May, June.

36. E. Javanica, Lamk. Encycl. III. 200. (*E. alba*, Roxb. Fl. Ind. II. 493; Wight Icon. t. 548; *Jambosa alba*, Rumph. Herb. Amb. I. 127. t. 39; Miq. Fl. Ind. Bat. I. 413).

Hab. Frequent in the coast-forests of the Andaman islands.—Fl. March, Apr.; Fr. May, June.

*37. E. Jambos, L. sp. pl. 672; Roxb. Fl. Ind. II. 494; Wight Illust. II. 14. (*Jambosa vulgaris*, DC. Prod. III. 286; Wight Icon. t. 435; Miq. Fl. Ind. Bat. I. 425).

Hab. Frequently planted in villages all over Burma.—Fl. May—July; Fr. CS.

38. E. polypetala, Wall. Cat. 3616; Wight Ill. II. 14 and Icon. t. 610. (*E. angustifolia*, Roxb. Fl. Ind. II. 490, non Lamk.).

Hab. Chittagong (Roxb.).—Fl. March, April; Fr. June, July.

Barringtonia, Forst.

Conspectus of Species.

Subg. I. BUTONICA, Rumph. Calyx closed in bud, entire, valvately rupturing into 2 to 4 lobes. Ovary 4-celled. Flowers pedicelled.

* *Fruite angular, without appendages, 1-seeded.*

Flowers about 3 in. in diameter or larger, in corymb-like short erect racemes; leaves entire, sessile, ... *A. Asiatica.*

Flowers about an in. in diameter, in long slender pendulous racemes; leaves crenulate, very shortly petioled, ... *B. racemosa.*

* * *Fruit conically pyramidal, with short wing-like basal appendages.*

Leaves serrulate; racemes rather erect, puberous, ... *B. conoidea.*

Subg. II. STRAVADIUM, Juss. Calyx already in bud 3—4-cleft, the lobes imbricate.

* *Ovary 4-celled. Rachis of raceme very thick.*

\+ Calyx-tube winged; fruits narrowly winged on the corners. Flowers sessile.

Calyx-lobes rounded, 2 lin. long; leaves obtuse or acute at the base, not decurrent, .. *B. augusta.*

Calyx-lobes triangular-ovate, more or less acute, more than 3 lin. long; leaves long-decurrent, ... *B. pterocarpa.*

\+ \+ Calyx-tube terete or angular, not winged.

× Flowers sessile.

Leaves elongate, entire, long-petioled; calyx angular, ... *B. macrostachya.*

× × Flowers pedicelled.

Leaves elongate, long-petioled ; calyx terete, ... *B. pendula.*

* * *Ovary 2-celled. Rhachis of raceme slender. Flowers pedicelled. Fruits sharply 4-angular.*

Glabrous or pubescent ; flowers rather small, red ; leaves crenulate, shortly petioled, .. *B. acutangula.*

1. B. ASIATICA, (*Mammea Asiatica*, L. sp. pl. 731 ; *B. speciosa*, L. f. Suppl. 312 ; Roxb. Fl. Ind. II. 636 ; Wight Icon. t. 547 ; Miq. Fl. Ind. Bat. I. 485, vix Forst. ; Paxt. Bot. Mag. X. 241. cum icon. ; Houtt. Fl. d. serr. IV. 409 cum icon. ; *Agasta Asiatica*, Miers in Linn. Trans. 2nd ser. Bot. I. 61. t. 12. f. 10—16 ; *Agasta Indica*, Miers l. c. 63. t. 12. f. 1—10).

HAB. Frequent in the coast-forests, especially the beach-forests, of the Andamans ; most probably also in those of Tenasserim.—Fl. Fr. HS.

2. B. RACEMOSA, DC. Prod. III. 288 ; Roxb. Fl. Ind. II. 634 ; Freyc. It. Bot. 483. t. 107 ; Wight Icon. t. 151 ; Miq. Fl. Ind. Bat. I. 486 ; Griff. Not. Dicot. 659. t. 636. f. 2 ? ; Hook. Bot Mag. t 3831.—(*Eugenia racemosa*, L. sp. pl. 673 ; *Butonica racemosa*, Juss. gen. 326 ; Miers in Linn. Trans. 2nd. ser. I. 66. t. 13. f. 11—17. ; *Butonica rubra*, Miers l. c. 70. t. 14. f. 1—3 ; *Butonica terrestris*, Rumph. Hb. Amb. III. 181. t. 115 ; Miers l. c. 69. t. 14. f. 4—9 ; *Butonica inclyta*, Miers l. c. 71. t. 14. f. 19 ? ; *Butonica Zeylonica*, Miers l. c. 77).

HAB. Frequent in the coast-forests, especially the beach-forests, of Tenasserim and the Andamans.—Fl. April ; Fr. May, June.

3. B. CONOIDEA, Griff. Not. Dicot. 656. t. 635 and t. 636. f. 1. (*B. alata*, Wall. Cat. 3633 ; *Butonica alata*, Miers in Linn. Trans. 2nd. ser. I. 70. t. 14. f. 10—15).

HAB. Coast-forests of Tenasserim from Moulmein southwards.—Fl. April.

Miers brings part of this species to his *B. alba* and in this case, as elsewhere, accuses the editor of Griffith's Posthumous Papers of having confused the plates, but in this he is greatly in error.

4. B. AUGUSTA, Kurz in Journ. As. Soc. Beng. 1873. 233 (*Doxomma augustum*, Miers in Linn. Trans. 2nd. ser. I. 105).

HAB. Tenasserim, from Moulmein southwards.—Fl. Febr.

5. B. PTEROCARPA, Kurz in Journ. As. Soc. Beng. 1873. 234. (*Doxomma magnificum*, Miers in Linn. Trans. 2nd ser. I. 106 ?).

HAB. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah, and Martaban down to Tenasserim.—Fl. March, April ; Fr. June.

Very nearly allied to the preceding, from which it differs in the few characters above given. The unripe fruits a good deal resemble those of *Doxomma Cochinchinense*, Miers (l. c. t. 16. f. 2), but this species has very long slender petioles.

6. B. MACROSTACHYA, (*Careya macrostachya*, Jack Mal. Misc. 47.; DC. Prod. III. 295; *Doxomma macrostachyum*, Miers in Linn. Trans. 2nd ser. I. 104.; *B. cylindrostachya*, Griff. Not. Dicot. 655; *Doxomma cylindrostachyum*, Miers l. c. 100; *Stravadium sarcostachys*, Bl. in v. Houtt. Fl. d. serr. VII. 24.; *B. sarcostachys*, Miq. Fl. Ind. Bat. I. 490; *Doxomma sarcostachys*, Miers l. c. 102; *Doxomma acuminatum*, Miers l. c. ?).

HAB. Tenasserim, in the forests of Mergui (Griff. 2421/2); (Ava, accord. Miers).

7. B. PENDULA, (*Doxomma pendulum*, Miers in Linn. Trans. 2nd ser. I. 99. t. 15. f. 9—15; *Careya pendula*, Griff. Not. Dicot. 661. t. 634.)

HAB. Tenasserim, Mergui (*teste* Miers).

8. B. ACUTANGULA, Gærtn. Fruct. II. 96. t. 101; WA. Prod. I. 333; Miq. Fl. Ind. Bat. I. 488; Bedd. Fl. Sylv. t. 204; Roxb. Fl. Ind. II. 635. (*Eugenia acutangula*, L. sp. pl. 673; *Stravadium acutangulum*, Miers. in Linn. Proc. 2nd ser. I. 80, t. 17. f. 1—14; *Stravadium obtusangulum*, Bl. in v. Houtt. Fl. d. serr. VII. 24; Miers l. c. 81.; *Stravadium demissum*, Miers l. c. 81; *Stravadium Rheedii*, Bl. in v. Houtt. Fl. d. serr. VII. 24; Miers l. c. 82; *Stravadium pubescens*, Miers l. c. 83; *Stravadium coccineum*, DC. Prod. III. 289 ?; Miers. l. c. 83 ?).

HAB. Frequent in the mixed forests, especially the lower ones and the savannahs, common in the swamp-forests, all over Burma from Chittagong and Ava down to Tenasserim.—Fl. April, May; Fr. June, July.

Careya, Roxb.

Conspectus of Species.

Subg. I. CAREYA, Roxb. Outermost and innermost series of stamens reduced to filaments. Embryo consolidate.

* *Flowers long-pedicelled.*

Undershrub; berries only an in. thick; seeds about 3 lin. long, ... *C. herbacea.*

* * *Flowers sessile. Trees.*

Petals blunt or rounded, concave. Ovules in 2 rows in each cell, ... *C. arborea.*

Petals acute, the borders revolute. Ovules in 6 rows in each cell, ... *C. sphaerica.*

Subg. II. PLANCHONIA, Bl. Only the innermost row of stamens reduced to filaments. Embryo of 2 distinct cotyledons.

Fruits ellipsoid, angular-ribbed, ... *C. valida.*

1. C. ARBOREA, Roxb. Corom. Pl. III. 13. t. 218 and Fl. Ind. II. 638; Wight Icon. t. 556, sub nom. erron. *C. sphæricæ*, and Illust. II. t. 99 and 100; Miq. Fl. Ind. Bat. I. 494; Miers in Linn. Trans. 2nd ser. I. 97; Bedd. Fl. Sylv. t. 205 (*C. orbiculata*, Miers l. c. 98. t. 16. f. 6—8).

HAB. Frequent in the open forest and the lower mixed and savannah-forests, all over Burma from Chittagong, Pegu, and Martaban down to Tenasserim.—Fl. April, May; Fr. June, July.

2. C. SPHÆRICA, Roxb. Fl. Ind. II. 636; Wight Icon. t. 147; Miq. Fl. Ind. Bat. I. 494; Miers in Linn. Trans. 2nd ser. I. 97. t. 16. f. 9—15?).

HAB. Mountains of Chittagong (Roxb.).—Fl. April; Fr. July.

3. C. VALIDA, (*Pirigara valida*, Bl. Bydr. 1096; *Planchonia valida*, Miers in Linn. Trans. 2nd ser. I. 94; *Planchonia littoralis*, Bl. in v. Houtt. Fl. d. serr. VII. 25; Miers l. c. 94).

HAB. Frequent in the coast-forests of the Andaman islands.—Fl. HS.

Doubtful Genus.

1. *Lencymmæa salicifolia*, Prsl. Epim. Bot. 211; Walp. Ann. III. 891.

HAB. Tenassserim, Moulmein (Helfer).

A genus which is entirely enigmatic to me; the gamopetalous corolla and the insertion of the very numerous stamens on the bottom of the calyx form a puzzling combination of characters. If the corolla be incorrectly described, we may guess *Myrtaceæ* as its probable affinity.

MELASTOMACEÆ.

Conspectus of Genera.

Subord. I. MELASTOMEÆ. Ovary 2- or more -celled, the placentas attached to the middle or base of the axial angle, usually elongate, rarely sessile. Seeds usually numerous and minute, rarely few and large. Leaves usually 3—7-nerved from the base.

* *Placentas attached to the middle of the axial angle. Anthers opening by* 1 *or* 2 *apical pores.*

× Capsule dry or rarely sappy, dehiscing by apical valves, rarely irregularly rupturing.

Trib. 1. *OSBECKIEÆ.* Ovary with a conical or convex free apex. Connective usually produced beyond the base of the anthers. Capsule dry or berry-like. Seeds minute, cochleate.

OSBECKIA. Anthers usually all equal or nearly so. Fruit a capsule.

OTANTHERA. Anthers equal. Fruit a berry.

MELASTOMA. Anthers always unequal. Fruit a berry.

Trib. 2. *OXYSPOREÆ.* Connective acute or spurred behind, not appendaged in front. Seeds angular or oblong to club-shaped.

OXYSPORA. Calyx costate. Stamens 4, equal, or 8 and usually unequal. Ovary and the club-shaped capsule high-up adnate to the calyx. Flowers laxly cymose, in terminal panicles.

ALLOMORPHIA. Calyx costate. Stamens 8 or 10, nearly equal. Ovary free or adnate to the bottom of the calyx. Capsule ovoid, included in the urceolate costate calyx. Flowers clustered or almost whorled, in narrow terminal panicles.

Ochthocharis. Calyx terete and smooth. Stamens 10, equal. Ovary and capsule adnate to the calyx, the latter globular, smooth. Cymes often axillary, or rarely collected into terminal panicles.

Anerincleistus. Calyx terete. Anthers 8, equal. Capsule 4-valved at the top, almost free. Flowers in axillary fascicles or umbellets.

Trib. 3. *SONERILEÆ.* Ovary broadly carved out and depressed at the 3- to 5-cornered top. Connective rarely produced at the base. Capsule opening at the top into triangular valves, 3—5-cornered, rarely terete. Seeds minute, straight, angular (never cochleate).

Sonerila. Flowers 3-merous. Stamens 3 or 6. Capsule 3-celled. Herbs, or rarely undershrubs, sometimes stem-less.

Sarcopyramis. Flowers 4-merous. Stamens 8. Capsule 4-celled, included in the succulent calyx. Succulent glabrous herbs.

× × Berry sappy or coriaceous, irregularly rupturing.

Trib. 4. *MEDINILLEÆ.* Ovary wholly, or only its angles, adnate to the calyx, the convex or conical top free. Stamens conform, or the alternating ones reduced to curiously shaped staminodes, inserted on the limb or thrust into the cavities formed by the adhesion of the ovary-angles to the calyx; anthers usually recurved.

× Stamens very unequal.

Dissochæla. Anthers 4 or 8, the connective with 2 bristles or lamellæ in front, often spurred behind. Panicles terminal.

Anplectrum. Anthers 4 or 8, the connective usually not appendaged in front, shortly spurred behind. Ovary 4-crested at the top. Panicles often axillary.

× × Stamens almost equal.

Medinilla. Calyx-tube not or barely produced beyond the ovary. Anthers 8, 10, or 12, 2-lobed or 2-spurred in front, often bristly, 1—2-lobed or 1-spurred behind. Ovary 4—6-celled. Erect or scandent shrubs.

* * *Placentas inserted to the base of the axial angle or to the walls of the cells. Anthers opening by longitudinal slits.*

Trib. 5. *ASTRONIEÆ.* Ovules numerous. Berry coriaceous or succulent, many-seeded, the seeds minute.

Pternandra. Calyx smooth or scaly, the limb truncate, obscurely 4-lobed. Stamens 8. Trees or shrubs.

Subord. II. MEMECYLEÆ. Ovary 1-celled, with a free central placenta to which 6 or more ovules are attached in a whorl. Berry succulent or coriaceous, 1-seeded. Embryo large, the cotyledons much folded and leafy.

Memecylon. Anthers 8, equal. Trees or shrubs, with penninerved or very rarely 3-nerved leaves.

Osbeckia, L.

Conspectus of Species.

* * *Petals* 8. *Stamens* 3.

× Flowers small. Calyx-tube bell-shaped. Anthers short, truncate or abruptly beaked.

Calyx not ribbed, glabrous or more or less covered with long fringed scales; anthers prolonged into a bristle-like beak, ... *O. Chinensis.*

× × Flowers rather large and conspicuous. Calyx-tube elongate urceolate, in fruit produced into a tubular neck overtopping the bristle-crown of the capsule.

Bristly hairy; calyx covered with peltate stellate-bristly scales, the ciliate lobes linear-subulate, alternating with as many minute teeth conform with the lobes; branches 4-cornered, ... *O. crinita.*

Almost glabrous or minutely bristly; calyx sparingly sprinkled with minute ciliate scales, or smooth, the lobes lanceolate, usually ciliate, alternating with minute ciliate teeth; branchlets 4-cornered, ... *O. rostrata.*

* * *Petals* 5. *Stamens* 10.

More or less densely pubescent; petiole very short or the leaves almost sessile; bracts broadly obovate; calyx loosely covered with rotundate fringed scales, .. *O. Nepalensis.*

More or less appressed bristly, the branches much tubercled; petiole $\frac{2}{3}$—1 in. long; bracts lanceolate; calyx appressed setose, ... *O. aspericaulis.*

1. O. CHINENSIS, L. sp. pl. 490; DC. Prod. III. 141; Triana in Linn. Trans. XXVIII. 53. (*O. angustifolia*, Don. Prod. Nep. 221; DC. l. c. 142; Wall. Pl. As. rar. III. t. 251; Naud. in Ann. d. sc. nat. 3 ser. XIV. 69).

Var. α. GENUINA, flowers sessile; calyx-tube not or sparingly ciliate-scaly, about 3 lin. long or longer, the lobes broad, about as long as the tube.

Var. β. LINEARIS, (*O. linearis*, Bl. Mus. Lugd. Bat. I. 51; Naud. in Ann. d. sc. nat. 3 ser. XIV. 70 and XIII. t. 7. f. 4; *O. Zeylanica*, DC. Prod. III. 141; Roxb. Fl. Ind. II. 223), calyx somewhat smaller and shorter, almost spherical, more or less covered with long-hairy scales, sometimes (in bud) appearing densely pilose; flowers nearly twice as large, on short pedicels, the calycine lobes shorter and narrower.

HAB. Frequent on grassy or waste places of the plains, and more so in the open forests, all over Pegu.—Fl. Fr. Decb.

2. O. ROSTRATA, Don. Prod. Nep. 221: Trian. in Linn. Trans. XXVIII. 53. (*O. quaterna*, Ham. in Don. l. c. 222).

Var. α. PULCHELLA, Triana l. c. 54 (*Melastoma pulchellum*, Roxb. Fl. Ind. II. 403; *O. pulchella*, Bth. ap. Naud. in Ann. d. sc. nat. 3 ser. XIV. 73.), the 4-conered stems and branchlets and leaf-nerves minutely bristly; calyx-tube covered with ciliate scales.

Var. β. LONGICOLLIS, Triana l. c. 54, leaves, the 4-cornered stem and branches glabrous, the latter usually bristly fringed between the petioles; calyx and its lobes quite glabrous, or only the latter ciliate.

? Var. γ. TERNIFOLIA, Trian. l. c. 54 (*O. ternifolia*, Don. Prod. Nep. 221; DC. Prod. III. 142; Wall. Pl. As. rar. III. 21. t. 239), pretty glabrous, branches 8-cornered, calyx less stellate-bristly, apparently without additional teeth between the lanceolate-linear calyx-lobes.

Hab. Var. *α.* in Chittagong (Roxb.); not unfrequent on hill-pastures and the drier hill-forests especially the pine-forests, of the Martaban hills, at 3500 to 5000 ft. elevation; var. *β.* on jungle pastures of the low forests of Pegu; var. *γ.* Taong-dong and Rangoon, *teste* Triana.—Fl. Decb.; Fr. March—June.

3. O. crinita, Bth. ap. Naud. in Ann. d. sc. nat. XIV. 72; Triana. in Linn. Trans. XXVIII. 53 (*Melastoma crinitum*, Roxb. Fl. Ind. II. 402).

Hab. Chittagong (Roxb.); not unfrequent in the drier hill-forests, especially in open grassy places, of the Martaban hills east of Tounghoo, at 4000 to 7000 ft. elevation.—Fr. March.

4. O. Nepalensis, Hook. Fl. Exot. t. 31; Naud. in Ann. d. sc. nat. Bot. XIV. 68 and XIII. t. 7. f. 2; Bot. Reg. t. 1475; Triana in Linn. Trans. XVIII. 55.

Hab. Ava, Khakyen hills.—Fr. March.

5. O. aspericaulis, Hf. in Linn. Trans. XXVIII. 55.

Hab. Tenasserim? (Helf. 2244).

Otanthera, Bl.

1. O. bracteata, Korth. Verh. Nat. Gesch. Bot. 235. t. 51; Naud. in Ann. d. sc. nat. 3 ser. XIII. 354: Miq. Fl. Ind. Bat. I. 516; Triana in Linn. Trans. XXVIII. 55.

Hab. Apparently frequent in Tenasserim, from the Attaran district southwards to Mergui.—Fl. Febr.—July.

Melastoma, L.

Conspectus of Species.

× Leaves more or less appressed bristly hairy or pubescent.

\+ Calyx covered with closely appressed chaffy scale-like bristles.

Scales of calyx about ⅓ lin. long or longer, often rather broad, the calycine lobes shorter, often only half as long as the tube; leaves usually appressed-strigose on both sides, usually acute, ... *M. Malabathricum.*

Scales of calyx up to a line long, chaffy, ciliate or finely cleft, the calycine lobes about as long as the tube, ovate to lanceolate, acuminate, alternating with as many short subulate teeth; leaves on both sides, or beneath only, softly appressed-pubescent, usually acuminate, ... *M. normale.*

\+ + Calyx covered with squarrose more or less spreading scale-like bristles about 2 lin. long.

Leaves softly appressed-pubescent on both sides, ... *M. Houtteanum.*

× × Leaves glabrous, or only with a few scales on the nerves beneath.

Calyx covered with long fine spreading curved bristles, the accessory teeth nearly as long as the calyx-lobes themselves, ... *M. decemfidum.*

1. M. Malabathricum, L. sp. pl. 559; Roxb. Fl. Ind. II. 405; Naud. in Ann. d. sc. nat. 3 ser. XIII. 285; WA. Prod. I. 324; Bot. Reg. t. 672; Wight Ill. I. t. 95; Trian. in Linn. Trans. XXVIII. 59. (*Trembleya rhynanthera*, Griff. Not. Dicot. 677).

Hab. Common in shrubbery and waste places, along river-sides, in savannahs, along borders of forests, &c., all over Burma down to Tenasserim.—Fl. Fr. ∞.

I have no clear idea as to the differences between the various species of this alliance. Bentham reduces all the 40 species enumerated by Naudin (in Ann. d. sc. l. c. 283—293) as "species magis ad *M. Malabathricum* vergentes ideoque difficilius distinguendæ," while Triana keeps most of them distinct without assigning diagnostic characters to them.

N. B. *M. imbricatum*, Wall. (nomen nudum) Trian. in Linn. Trans. XXVIII. 60 = *M. fasciculare*, Naud. in Ann. d. sc. nat. 3 ser. XIII. 288, from Tenasserim or the Andamans (Helf. 2243), is unknown to me.

2. M. normale, Don. Prod. Nep. 220; DC. Prod. II. 145; Naud. in Ann. d. sc. nat. 3 ser. XIII. 289; Triana in Linn. Trans. XXVIII. 60. (*N. Napalense*, Lodd. Bot. Cab. t. 707.)

Hab. Frequent in the drier hill-forests of Martaban, up to 5000 ft. elevation; Ava, Khakyen-hills.

3. M. Houtteanum, Naud. in Ann. d. sc. nat. 3 ser. XIII. 291.

Hab. Here and there in the tropical forests of the eastern slopes of the Pegu Yomah; also Andamans (*teste* Triana); Martaban, from Moulmein southwards (Brandis; Helf. 2241).—Fl. March.

Oxyspora, DC.

Conspectus of Species.

Glabrous; branchings of panicle 4-cornered or 4-winged; bracts &c. persistent; connective without any appendage, ... *O. cernua.*

Stems and petioles often hairy; panicle-branchings terete; bracts very deciduous; connective spurred at the base of the back, ... *O. vagans.*

1. O. cernua, Hf. and Th. ap. Triana in Linn. Trans. XXVIII. 73. (*Melastoma cernua*, Roxb. Fl. Ind. II. 404; *Allozygia cernua*, Naud. in Ann. d. sc. nat. 3 ser. XV. 309. t. 15. f. 5.)

Hab. Chittagong (Roxb.).—Fl. Oct., Nov.; Fr. Febr., March.

Allomorphia, Bl.

Conspectus of Species.

Habit of *A. Griffithii*, the stems, petioles and the 9 strong ribs beneath densely covered with long brownish bristles; calyx-teeth minute, ... *A. hispida.*

Quite glabrous; leaves 5-ribbed; calyx-lobes with a thick wing-like appendage on the back, ... *A. umbellulata.*

1. A. hispida, Kurz in Journ. As. Soc. Beng. 1871. 53.

Hab. Upper Tenasserim (Brandis).

2. A. umbellulata, Hf. in Linn. Trans. XXVIII. 74.

Hab. Tenasserim, Mergui Archipelago, on the island St. Mathia (Helf. 2660).

Ochthocharis, Bl.

1. O. JAVANICA, Bl. Bydr. Nat. Wet. VI. 264 and Mus. Bot. Lugd. Bat. I. 40; Naud. in Ann. d. sc. nat. 3 ser. XV. 307; Miq. Fl. Ind. Bat. I. 556; Trian. in Linn. Trans. XXVIII. 74.

HAB. Tenasserim (Helf. 2277).

Anerincleistus, Korth.

Conspectus of Species.

Calyx softly appressed-pubescent, ... *A. Helferi.*
Calyx very densely and spreadingly hirsute, ... *A. Griffithii.*

1. A. HELFERI, Hf. in Linn. Trans. XXVIII. 75.

HAB. Tenasserim (or Andamans?) (Helf. 2304).

2. A. GRIFFITHII, Hf. in Linn. Trans. XXVIII. 75.

HAB. Mergui Archipelago (Griff. 2304).

Sarcopyramis, Wall.

1. S. LANCEOLATA, Wall. in Benn. Pl. Jav. rar. 214. (*S. grandiflora*, Griff. Not. Dicot. 678 t. 639. f. 2.).

HAB. Not unfrequent in dark ravines and along torrents in the damp hill-forests of the Nattoung mountains east of Tounghoo, at 6000—7000 ft. elevation; also Ava hills.—Fl. Fr. March.

Sonerila, Roxb.

Conspectus of Species.

* *Capsules terete or trigonously-terete.*
× Anthers elongate.
Annual, 2 ft. high, glabrous or nearly so; leaves narrow-linear, serrulate,.. *S. linearis.*
× × Anthers short.
Annual, about ½ ft. high, puberulous; calyx slightly downy and glandular-hairy, .. *S. stricta.*

* * *Capsules sharply 3-gonous or 3-quetrous.*
× Anthers short.
Small annual, 1—5 in. high, sparingly and spreadingly gland-hairy; leaves 4—8 lin. long, ovate to oval; capsule usually with a few hairs, ...*S. tenera.*
× × Anthers long-acuminate.
\+ Caulescent herbs.
† Stem short and very thick, scared.
Quite glabrous; leaves lanceolate, decurrent, 4—7 in. long, ... *S. Brandisiana.*
† † Stems elongate, slender and leafed.
Herb 1—1½ ft. high, sparingly hairy; leaves 3—4 in. long, more or less cordate at the base, decussately opposite; capsules glabrous, ... *S. maculata.*
As preceding, but leaves whorled, ... *S. secunda.*
\+ \+ Scapigerous stemless herbs.
Leaves 5—7-plinerved; calyx 4-toothed; petals oblong, acuminate, ... *S. violæfolia.*
Leaves penni-nerved, ciliate; petals obovate, cuspidate; anthers about a line long, .. *S. nudiscapa.*

1. S. LINEARIS, Hf. in Linn. Trans. XXVIII. 76.

HAB. Upper Tenasserim, Moulmein, on the "Gevai" hill, at 3000 ft. elevation (Lobb.).

2. O. STRICTA, Hook. Bot. Mag. t. 4394.

HAB. Tenasserim, Moulmein (Lobb.).

3. S. TENERA, R. Br. in Wall. Cat. 4098; Royle Ill. Him. Pl. 250. t. 45. f. 2; Walp. Nep. II. 124 and V. 685.

HAB. Here and there in the eng and low forests, especially on laterite rocks and old pagodas &c., very rare in the upper mixed forests and on pagodas of the plains, all over Pegu, Martaban and Tenasserim as far south as Tavoy.—Fl. Fr. Decb., Jan.

4. S. BRANDISIANA, Kurz in Journ. As. Soc. Beng. 1871. 53.

HAB. Upper Tenasserim, Thoungyeen (Dr. Brandis).

5. S. PICTA, Korth. Verh. Nat. Gesch. 249. t. 52; Naud. in Ann. d. sc. nat. 3 ser. XV. 26; Bl. Mus. Bot. I. 11; Griff. Not. IV. 676. *teste* Triana.; Miq. Fl. Ind. Bat. I. 564.

HAB. Tenasserim, Mergui, on rocks near Palar (Griff.).—Fl. Octob.

6. S. MACULATA, Roxb. Fl. Ind. I. 177. (*S. angustifolia*, Roxb. l. c. 178; Wall. Pl. As. rar. II. t. 102).

Var. *α.* GENUINA, all parts sprinkled with hairs; leaves bristly serrulate, usually ovate and equilateral, above elegantly white-blotched.

Var. *β.* EMACULATA, (*S. emaculata*, Roxb. l. c.), as preceding, but the leaves uniformly green.

Var. *γ.* ANGUSTIFOLIA, (*S. angustifolia*, Roxb. l. c. 178), leaves usually acute or acuminate at the very unequal base, not blotched, but often purplish coloured beneath.

HAB. Not unfrequent in shady localities, especially on mossy rocks and along rocky streamlets, in the hill-forests, especially the moister ones, of the Martaban hills and of Tenasserim, at 3000 to 5000 ft. elevation.—Fr. March.

7. S. SECUNDA, Wall. Cat. 4094; Benn. Horsf. Pl. Jav. rar. 216; Walp. Rep. V. 685.

HAB. Tenasserim, Tavoy.

8. S. NUDISCAPA, Kurz MS.

HAB. Tenasserim, Mergui (Griff. 2303).

9. S. VIOLÆFOLIA, Hf. in Linn. Trans. XXVIII. 77.

HAB. Tenasserim, Moulmein (Lobb. 356, *teste* Triana).

N. B. *S. Teysmanniana*, Miq. Suppl. Fl. Sumatr. 320 = *S. obliqua*, Korth.

Anplectrum, A. Gray.

1. A. CYANOCARPUM, Triana in Linn. Trans. XXVIII. 84 (*Melastoma cyanocarpum*, Bl. Bydr. 1073; *Dissochæta cyanocarpa*, Bl. Bydr. 243;

Korth. Verh. Nat. Gesch. Bot. 238. t. 56 ; Naud. in Ann. d. sc. nat. 3 ser. XV. 71 ; Miq. Fl. Ind. Bat. I. 522.)

Hab. Rare in the tropical forests of Martaban, east of Tounghoo ; Tenasserim (Helf. 2290).

Doubtful Species.

1. *A. ? barbatum*, Triana in Linn. Trans. XXVIII. 84 (*Melastoma barbatum*, Wall. Cat. 4082).

Hab. Tenasserim, Chappedong (Wall.).

2. *Melastoma cordifolia*, Roxb. Fl. Ind. II. 405.

Hab. Chittagong (Roxb.).

Probably same as *A. cyanocarpum*.

3. *Melastoma curva*, Roxb. Fl. Ind. II. 406.

Hab. Chittagong (Roxb.)

Pternandra, Jack.

Conspectus of Species.

Flowers in small stout almost simple cymes, ... *P. capitellata.*
Flowers in branched rather slender axillary and terminal panicles, ... *P. cærulescens.*

1. P. capitellata, Jack in Mal. Misc. II. 60 ; Triana in Linn. Trans. XXVIII. 153.

Hab. Tenasserim (or Andamans ?) (Helf. 2279 *teste* Triana).

2. P. cærulescens, Jack in Mal. Misc. 1822. II. 61 and in Hook. Comp. Bot. Mag. I. 157 ; Triana in Linn. Trans. XXVIII. 153. (*Ewyckia Jackiana*, Walp. Rep. V. 724 ; *Apteuxis trinervis*, Griff. Not. Dicot. 672 ; *Ewyckia paniculata*, Miq. Suppl. Fl. Sumatr. 321).

Hab. Tenasserim (Helf. 2275).

Memecylon, L.

Conspectus of Species.

* *Calyx within without radiate lamella-like nerves, or the nerves very obsolete,* (chiefly Hindustani species).

Leaves sessile or nearly so, opaque, drying yellowish ; cymes sessile, umbel-like ; calyx conspicuously 4-toothed, ... *M. umbellatum.*

* * *Calyx radiately nerved within, the nerves simple or forked, raised and lamella-like like the gills of a mushroom.*

× Berry ovoid or ovoid-oblong. Cymes and pedicels very short and robust.

Leaves sessile or very shortly petioled, with the base rounded or cordate, *M. cæruleum.*

× × Berry globose, the size of a pea to that of a cherry.

† Cymes short and sometimes reduced. Leaves usually thick coriaceous, without visible lateral nerves or veins, petioled.

△ Berries the size of a pea or smaller.

† Branchlets more or less terete, sometimes marked with obsolete lines.

O Calyx up to a line in diameter, not tubercled.

Leaves attenuate at the base, very acuminate, glossy; petiole 1—2 lin. long; pedicels hardly a line long, thick; cymes very short, almost sessile, ... *M. lævigatum.*

Leaves attenuate at the base, sharply acuminate; pedicels 1—1½ lin. long; umbel-like cymes shortly peduncled, ... *M. plebejum.*

O O Calyx about 1½ lin. across, tubercled.

Pedicels short and thick; calyx undulate-truncate with a hemispherical tubercled base; leaves bluntish or retuse, shortly acuminate, ... *M. punctatum.*

† † Branchlets sharply 4-lined or almost 4-winged and appearing more or less 4-cornered.

Calyx smooth, about 1½ lin. across, expanded, obsoletely undulate-lobed; cymes almost sessile or shortly peduncled; leaves as in preceding species, ... *M. scutellatum.*

Calyx about ½ lin. wide, sharply 4-toothed; leaves only ½—1½ in. long; pedicels about a line long; cymes much reduced, almost sessile, few-flowered, ... *M. pauciflorum.*

△ △ Berries the size of a cherry, sappy.

.. *M. cerasiforme.*

\+ + Cymes more or less ample, peduncled. Berries the size of a pea or smaller,

\+ Leaves rather thin-coriaceous, the lateral nerves more or less conspicuous and arcuately anastomosing towards the margin.

Cymes simple, the pedicels slender; calyx 1—1½ lin. wide. Leaves those of *M. cerasiforme*, .. *M. celastrinum.*

Umbellets in thyrsoid cymes, the pedicels 1—2 lin. long; calyx ⅔ lin. wide, the limb sinuate 4-angular, ... *M. Griffithianum.*

† † Leaves more or less thick-coriaceous, the lateral nerves not or barely visible.

O Leaves sessile, with a cordate base.

Leaves large; cymes lax, peduncled, rather slender: pedicels 2—3 lin. long, slender, .. *M. pulchrum.*

O O Leaves petioled, more or less tapering, very rarely rounded, at the base.

△ Branchlets sharply 4-cornered. Leaves tapering at base.

Cymes rather short-peduncled, but slender; leaves 3—4 in. long, ... *M. elegans.*

△ △ Branchlets terete or with only faint lines.

Leaves attenuate at the base, blunt or retuse, almost opaque when dried; petiole 1—2 lin. long; pedicels ½—1 lin. long, slender; cymes simple, peduncled, .. *M. ovatum.*

Leaves rounded at the base, smooth and shining; petiole 2—4 lin. long; pedicels 2—3 lin. long; cymes simple or compound, peduncled, ... *M. edule.*

1. M. UMBELLATUM, Burm. Thes. Zeyl. t. 31 and Fl. Ind. 87; Bth. Fl. Austr. III. 293; Triana in Linn. Trans. XXVIII. 159; Bedd. Fl. Sylv. t. 206 (*M. tinctorium*, Koen. in Willd. sp. pl. II. 347; Wight Ill. I. 215. t. 93; *M. ramiflorum*, Lamk. Dict. IV, 88; DC. Prod. III. 6. *ex parte*).

HAB. In the tropical forests of Boronga island opposite Akyab, Arracan.

2. M. CŒRULEUM, Jack in Mal. Misc. I. No. V. 26; Triana in Linn. Trans. XXVIII. 158; Miq. Fl. Ind. Bat. I. 580 (*M. lutescens*, Presl Epim. Bot. 208; *M. Manillanum*, Naud. in Ann. d. sc. nat. 3 ser. XVIII. 276; Miq. Fl. Ind. Bat. I. 576).

Var. α. GENUINA, berries ellipsoid-oval, nearly 5 lin. long; leaves almost sessile, acute.

Var. β. FLORIBUNDUM, (*M. floribundum*, Bl. Mus. Lugd. Bat. I. 361; *M. laurifolium*, Naud. in Ann. d. sc. nat. 3 ser. XVIII. 277; Miq. Fl. Ind. Bat. I. 576.), berries ellipsoid-oval, up to 5 lin. long; leaves rounded at the base, usually acute, on a petiole 1—1½ lin. long.

Var. γ. GRIFFITHIANA, (*M. cordatum*, Griff. Not. Dicot. 673), berries ellipsoid-globose, about 3—4 lin. in diameter; leaves often retuse or blunt with a mucro, almost sessile.

HAB. Var. γ. apparently frequent in Tenasserim, from Moulmein down to Mergui.—Fl. Jul. Aug.; Fr, March.

3. M. LÆVIGATUM, Bl. Mus. Bot., I. 358; Miq. Fl. Ind. Bat. I. 576; Triana in Linn. Trans. XXVIII. 157. (*M. pachyderma*, Wall. Cat. 4104).

HAB. Tenasserim (Helf. 2328); ib. Tavoy (Wall. Cat. 4104).—Fr. Octob.

4. M. PLEBEJUM, Kurz in Pegu Rep. App. B. 53.

HAB. Not unfrequent in the swamp-forests of the Irrawaddi in Pegu; Upper Tenasserim, Thoungyeen (Brandis); Ava, Bhamo (J. Anderson).

5. M. PUNCTATUM, Presl. Bot. Bemerk. 67; Walp. Ann. I. 303.

HAB. Tenasserim (Helf. 2330).

6. M. SCUTELLATUM, Naud. in Ann. d. sc. nat. 3 ser. XVIII. 282; Triana in Linn. Trans. XXVIII. 157.

Var. α. SUBSESSILE, umbellets on peduncles less than a line long or almost sessile; pedicels about a line long; leaves smaller.

Var. β. BREVI-PEDUNCULATUM, umbellets on peduncles 1 to 2 lin. long, the pedicels usually 2 lin. long; leaves larger.

HAB. Var. α. in the adjoining provinces of Siam; var. β. apparently frequent in Tenasserim, from Moulmein southwards; also Pegu, above Rangoon.—Fl. Apr.—June; Fr. Febr.—May.

7. M. PAUCIFLORUM, Bl. Mus. Bot. I. 356; Miq. Fl. Ind, Bat. I. 578; Triana in Linn. Trans. XXVIII. 158.

HAB. Not unfrequent in the tropical forests of the Andamans; Tenasserim (Helf. 2332), Amherst (Falconer); Chittagong (Hf. and Th.),—Fl. Begin of RS.

8. M. CERASIFORME, Kurz For. Fl. Burm. I. 516.

HAB. In the forests of Chittagong (Dr. Schlich).—Fr. CS.

9. M. CELASTRINUM, Kurz in Pegu Rep. App. B. 53 and For. Fl. Burm. I. 515.

Var. *α.* GENUINUM, leaves glaucous-green, coriaceous; cymes stiff-peduncled.

? Var. *β.* BRANDISIANUM, leaves of a thinner texture, more (often caudately) acuminate; cymes short or very short, simple or the lateral branchings almost reduced; peduncles 2—4 lin. long, pedicels more slender.

HAB. Var. *α.* Not unfrequent in the tropical forests of Martaban, rare in those of the eastern slopes of the Pegu Yomah; var. *β.* in the tropical forests of Upper Tenasserim, (Brandis, Falconer, Helf. 2335).—Fl. Febr.—Apr.; Fr. Jan.

10. M. GRIFFITHIANUM, Naud. in Ann. d. sc. nat. 3 ser. XVIII. 274. (*M. Horsfieldii*, Miq. in Fl. Ind. Bat. I. 572; *M. Lampongum*, Miq. Suppl. Fl. Sumatr. 321 ?).

HAB. Tenasserim (Helf. 2331); in the tropical forests of the Martaban hills east of Tounghoo.

11. M. PULCHRUM, Kurz in Journ. As. Soc. Beng. 1872. 307.

HAB. Not unfrequent in the tropical forests of the Andamans.—Fl. Begin of May.

12. M. ELEGANS, Kurz in Journ. As. Soc. Beng. 1872. 307.

HAB. Rather frequent in the tropical forests of the Andamans.—Fl. May.

13. M. OVATUM, Smith in Rees. Cycl. V. 23. No. 3.; DC. Prod. III. 6. (*M. grande*, Wall. Cat. 4109; *M. lucidum*, Presl Epim. Bot. 209; *M. prasinum*, Naud. in Ann. d. sc. nat. 3 ser. XVIII. 275).

HAB. Not unfrequent in the tropical forests from Martaban down to Tenasserim; also Chittagong.—Fl. Nov.—Febr.

14. M. EDULE, Roxb. Corom. Pl. I. 82; DC. Prod. III. 6; Triana in Linn. Trans. XXVIII. 158. (*M. edule*, var. γ. Thw. En. Zeyl. Pl. 110 and CP. 1563; *M. ramiflorum*, Griff. Not. Dicot. 673).

HAB. Not unfrequent in the tropical forests of the Andamans and the Cocos islands; also Tenasserim (Helf. 2329).—Fl. Apr.—May; Fr. June.

The genus *Memecylon* is in need of a thorough revision. The species are extremely difficult of correct identification without access to the very authentic specimens for the most part deposited in European herbaria and hence inaccessible to the Indian botanist. Triana's account of the genus is barely more than a compilation. I have, therefore, kept the Burmese forms all separate pending a comparison and identification of the same with those already described.

LYTHRARIEÆ.

Conspectus of Species.

* *Capsule irregularly or circumsciss-dehiscing, or 2-valved,* 1—4-*celled.*

× Seeds glabrous. Leaves not black dotted.

† Flowers with petals, or rarely apetalous in some herbs.

O Herbs. Capsule 1—5-celled, irregularly or transversely dehiscing.

Ammannia. Calyx 3—5-toothed. Stamens 2—8. Disk-glands none. Leaves opposite or rarely whorled.

Hydrolythrum. Calyx 4-lobed. Petals 4. Stamens 4. Disk-glands 8. Capsule 2-celled. Aquatics, with whorled leaves.

O O Trees or shrubs.

Pemphis. Calyx 12-toothed, ribbed. Petals 6. Stamens 12. Ovary 3-celled. Capsule 1-celled, transversely circumsciss.

Lawsonia. Calyx 4-parted. Petals 4. Stamens 8. Ovary and capsule 4-celled, the latter irregularly bursting.

† † Flowers apetalous. Trees or shrubs.

Crypteronia. Calyx 4—5-cleft. Stamens 4—5. Ovary and capsule 2-celled, the latter 2-valved.

Dichotomanthes. Calyx 5-toothed, terete, the teeth alternating with as many accessory minute ones. Stamens 10. Capsule woody, indehiscent ?, 1-celled.

× × Seeds pilose. Calyx-tube tubular, curved. Stamens declinate. Leaves black-dotted beneath.

Woodfordia. Calyx 6-lobed. Petals 6, or none. Stamens 12, long-exserted. Ovary and capsule 2-celled, the latter elongate, sessile, loculicidally 2-valved.

* * *Capsule regularly opening into* 3—8 *valves, or berry-like and indehiscent. Trees or shrubs.*

× Capsule dry or leathery, dehiscent.

Lagerstrœmia. Calyx bell-shaped, 4—6- rarely 7-cleft. Petals 4—6. Stamens numerous, in 2 or more rows. Capsule dry, almost woody, 3—6-celled and -valved. Seeds laterally winged.

Duabanga. Calyx 4—7-parted, thick coriaceous. Petals 4—7. Stamens numerous, in a single row. Capsule leathery, 4—8-celled and -valved. Seeds appendaged at both ends.

× × Capsule berry-like, indehiscent.

Sonneratia. Calyx bell-shaped, 4—8-lobed. Petals 4—8, or none. Stamens numerous. Berry many-celled.

Ammannia, L.

Conspectus of Species.

Subg. 1. *Rotala*, L. Flowers solitary (rarely and only occasionally by 2 or 3) in the axils of the leaves, or bracts, often forming spikes or racemes. Capsule 2—4-valved.

* *Disk-glands* 8 *under the ovary.* (Hydrolythrum, Hf.).

Aquatic herb of the habit of *Myriophyllum*, the leaves whorled, linear,.... *A. Wallichii.*

* * *Disk-glands absent.* (Rotala, L.).

× Calyx bell-shaped, thrice as deep as wide. Capsule shorter than, and included in, the calyx-tube.

Leaves very shortly petioled, 1-nerved, linear; flowers solitary, sessile; pygmæan annual, ... *A. dentelloides.*

Leaves usually sessile, strongly penninerved, obovate to oblong; flowers sessile, forming lateral and terminal leafy or bracted spikes, ... *A. peploides.*

Leaves sessile, almost orbicular, penninerved; flowers shortly and slenderly pedicelled, forming shorter or longer slender racemes, ... *A. subrotunda.*

Leaves sessile, orbicular or nearly so, penninerved; flowers sessile, in terminal pedunculed bracted simple or compound spikes, ... *A. rotundifolia.*

× × Calyx hemispherical, about as deep as wide; capsule protruded from, or at least as long as, the calyx-tube.

Leaves linear, 1-nerved, very shortly petioled; calyx 4-angular, 4-toothed, about $\frac{1}{4}$—$\frac{1}{6}$ lin. long; petals none; pygmæan herb, ... *A. pygmæa.*

Leaves oblong to linear-oblong, 1-nerved, very shortly petioled; calyx short, 4-toothed, about $\frac{1}{3}$ lin. long; flowers very shortly pedicelled; pygmæan herb, .. *A. simpliciuscula.*

Leaves oblong to linear, sessile, 1-nerved, or the lateral nerves very faint; calyx usually 5-toothed, $\frac{1}{2}$—1 lin. long; petals 5, ... *A. pentandra.*

Subg. 2. *Ammannia*, L. Flowers pedicelled or rarely sessile, axillary, clustered or in cymes, the latter sometimes reduced to 1 or a few flowers only. Capsule irregularly bursting.

× Leaves narrowed at the base, petioled or sessile.

Flowers minute, apetalous, on slender pedicels, forming sessile or very shortly pedunculed cymes or clusters, ... *A. baccifera.*

× × Leaves sessile, with a cordate, sagittate or dilated base. Petals present.

Capsule under a line long; stamens 4, or fewer; petals not crumpled; calyx 4-toothed, without accessory teeth; cymes slender, ... *A. multiflora.*

Capsule about $1\frac{1}{2}$ lin. long; stamens 6—8; petals not crumpled; calyx 4-toothed without accessory teeth; cymes slender, ... *A. auriculata.*

Capsule about 2 lin. long; stamens 8; petals large, crumpled; calyx 4-toothed with as many horn-shaped accessory teeth; cymes and pedicels short, stout, *A. octandra.*

1. A. Wallichii, (*Hydrolythrum Wallichii*, Hf. in Bth. and Hf. Gen. Pl. I. 777, and in Hook. Icon. pl. t. 1007).

Hab. Tenasserim, Tavoy (Gomez).

2. A. dentelloides, Kurz in Journ. As. Soc. Beng. 1870. 76.

Hab. Not unfrequent in wet pastures and rice-fields of Arracan.—Fl. Fr. Sept., Octob.

3. A. peploides, Spreng. Syst. Veg. I. 444 (1825). (*Peplis Indica*, Willd. Sp. pl. II/1. 244; Poir. in Lamk. Enc. V. 162; *A. repens*, Rottl. ex Mart. in Acad. Muench. VI. 150; DC. Prod. III. 80; *Ameletia Indica*, DC. in Mem. Soc. Genev. III/2. 82. t. 3. f. A. and Prod. III. 76; WA. Prod. I. 303; Wight Icon. t. 257. A.; Bl. Mus. Lugd. Bat. II. 135; *Ameletia elongata*, Bl. l. c.; *Ameletia acutidens*, Miq. Fl. Ind. Bat. 1/1. 617; *A. nana*, Roxb. Fl. Ind. I. 427, non DC.).

Hab. Common in wet pastures and fallow rice-fields, along river-

banks, around swamps, &c., all over Burma and the adjoining provinces.—Fl. Fr. Nov.—March.

4. A. SUBROTUNDA, Wall. Cat. 2096; Kurz in Journ. As. Soc. Beng. 1871. 55.

HAB. Ava, from Segain and Mandalay northwards in the Irrawaddi valley.—Fl. Fr. Jan.

5. A. ROTUNDIFOLIA, Buch. in Roxb. Fl. Ind. I. 425; DC. Prod. III. 79; WA. Prod. I. 306. (*Ameletia rotundifolia*, Wight Ill. I. 206 and Icon. t. 258).

HAB. Ava, Irrawaddi valley about Bhamo &c.; also Kakhyen hills.—Fl. Febr. March.

6. A. PYGMÆA, Kurz in Seem. Journ. Bot. 1867. 376.

HAB. On gravel-roads, sandy grounds &c., of the eng-forests along the western slopes of the Pegu Yomah, and no doubt elsewhere.—Fl. Fr. Nov.

7. A. SIMPLICIUSCULA, Kurz in Journ. As. Soc. Beng. 1871. 54.

HAB. On mud around ponds and in rice-fields in Chittagong.—Fl. Fr. Octob.

8. A. PENTANDRA, Roxb. Fl. Ind. I. 427 (1820); DC. Prod. III. 79, in part; WA. Prod. I. 305, in part; Bl. Mus. Lugd. Bat. II. 134. t. 46. f. B. (*Rotala Roxburghiana*, Wight Icon. t. 260. B.; Walp. Rep. II. 101; *Sellowia uliginosa*, Roth. Nov. sp. 163 (1821); DC. Prod. III. 380; *Tritheca pentandra*, Miq. Fl. Ind. Bat. I/1. 614.; *A. nana*, DC. Prod. III. 79, non Roxb.; *Rotala decussata*, DC. l. c. 76).

HAB. Frequent in wet pastures, rice-fields, along river-banks, &c., all over Burma, especially in cultivated lands —Fl. Fr. Close of RS.

9. A. BACCIFERA, L. sp. pl. 175; Bl. Mus. Bot. Lugd. Bat. II. 133. (*A. vesicatoria*, Roxb. Fl. Ind. I. 426; DC. Prod. III. 78; WA. Prod. I. 305; *A. Indica*, Lamk. Ill. I, 311. No. 1555; DC. Prod. III. 77, in part; WA. Prod. I. 305, in part; Bth. Fl. Austr. III. 297; Bl. Mus. Lugd. Bat II. 133. t. 46. f. A: *Cryptotheca apetala*, Bl. Bydr. 1128; DC. Prod. III. 76; *Hapalocarpum vesicatorium* and *H. Indicum*, Miq. Fl. Ind. Bat. I/1, 618).

HAB. Common in cultivated lands, in fallow rice-fields, on road-sides, along river-banks, lakes, &c., in open as well as in forest-land, all over Burma, up to 2000—3000 ft. elevation.—Fl. Fr. Nov.—May.

10. A. MULTIFLORA, Roxb. Fl. Ind. I. 426; DC. Prod. III 79; WA. Prod. I. 305. (*Cryptotheca dichotoma*, Bl. Mus. Bot. Lugd. Bat. II. 130. t. 44?; *A. microcarpa*, DC. Prod. III. 78?; *Suffrenia dichotoma*, Miq. Fl. Ind. Bat. I/1, 616).

HAB. Chittagong, in rice-fields and cultivated lands.—Fl. Fr. Octob.

11. A. AURICULATA, Willd. Hort. Berol. I. 7. t. 7; DC. Prod. III. 80; Bth. Fl. Austr. III. 297.

Hab. Chittagong, in rice-fields.—Fl. Fr. Octob.

12. A. octandra, L. f. Suppl. 127; Roxb. Corom. Pl. II. 18. t. 133 and Fl. Ind. I. 425; WA. Prod. I. 304; Bl. Mus. Lugd. Bat. II. 132. (*Amanella linearis*, Miq. Fl. Ind. Bat. I/1, 619; *Diplostemon octandrum*, Miq. l. c. 615).

Hab. Rice-fields in Chittagong.—Fl. Fr. Octob.

Pemphis, Forst.

1. P. acidula, Forst. Gen. t. 34; DC. Prod. III. 89; Bl. Mus. Bot. Lugd. Bat. II. 128. t. 43; WA. Prod. I. 307; Griff. Not. Dicot. 510, (*P. angustifolia*, Roxb. Fl. Ind. II. 465; *Maclellandia Griffithiana*, Wight Icon. t. 1996).

Hab. Rocky coasts all along Tenasserim and Andamans.—Fl. Fr. Octob. and Apr.

Lawsonia, L.

1. T. inermis, L. sp. pl. 498; Roxb. Fl. Ind. II. 258; Griff. Not. Dicot. 509. t. 590. f. 2. (*L. alba*, Lamk. Dict. III. 106; DC. Prod. III. 91; WA. Prod. I. 307; Wight Ill. I. t. 94; *L. spinosa*, L. sp. pl. 498).

Hab. Much cultivated all over Burma, and sometimes like wild around villages and in cleared lands.—Fl. Fr. nearly ∞.

Crypteronia, Bl.

Conspectus of Species.

Calyx about $\frac{1}{3}$ lin. across; leaves usually puberulous beneath, ... *C. pubescens.*
Calyx 1—$1\frac{1}{2}$ lin. in diameter; leaves quite glabrous, ... *C. paniculata.*

1. C. paniculata, Bl. Bydr. 1151 and Mus. Bot. Lugd. Bat. II. 123. t. 42. (*Henslovia paniculata*, Miq. Fl. Ind. Bat. I/1, 716; *Henslovia affinis*, Planch. in Hook. Lond. Journ. IV. 477; Miq. l. c.).

Var. α. glabra, (*Henslovia glabra*, Planch. in Hook. Lond. Journ. IV. 478; *Crypteronia paniculata*, Bl. l. c.), rhachis of racemes glabrous, at least in fruit.

Var. β. pubescens, (*Henslovia pubescens*, Griff. Not. Dicot. 404. t. 564. f. 2., non Planch.). rhachis of racemes densely puberulous, not glabrescent.

Hab. Var. α. in Chittagong; var. β. frequent in the tropical forests, especially the open ones, also in the moister upper mixed forests, from Arracan, Pegu, and Martaban down to Tenasserim.—Fl. Nov.—Jan.; Fr. Febr.—May.

Woodfordia, Salisb.

1. W. fruticosa, (*Lythrum fruticosum*, L. sp. pl. 641; *Woodfordia floribunda*, Salisb. Parad. Lond. t. 42; *Grislea tomentosa*, Roxb. Corom. Pl. I. 29. t. 31. and Fl. Ind. II. 233; Bot. Reg. I. t. 40; Bot.

Mag. t. 1906; DC. Prod. III. 92; WA. Prod. I. 308; Bl. Mus. Lugd. Bat. II. 128).

Var. α. GENUINA, more or less greyish or silvery appressed pubescent.

Var. β. PUNCTATA, Bl. Mus. Bot. Lugd. Bat. II. 128 (*Grislea punctata*, Ham. in Rees. Cycl. V. 17. No. 2.; DC. Prod. III. 92; WA. Prod. I. 308), leaves shortly petioled, almost glabrous.

HAB. Var. α. frequent in the dry forests of the Prome District; rare in the drier upper mixed forests of Pegu; Ava, Kakhyen hills.—Fl. Fr. Jan., Febr.

Lagerstrœmia, L.

Conspectus of Species.

Subg. 1. *Sibia*, DC. Calyx terete, without ribs or furrows.

* *Inflorescence and calyx glabrous.*

Leaves whitish glaucous beneath; flowers hardly ½ in. across, ... *L. parviflora.*
Leaves green; flowers 1½—2 in. in diameter, ... *L. Indica.*

* * *Inflorescence and calyx covered with a rusty coloured tomentum.*

Flowers almost racemose, in panicles; calyx by ½ or ⅔ shorter than the capsule, ..*L. calyculata.*

Subg. 2. *Adambea*, Lamk. Calyx furrowed, plaitedly ribbed or angular, the angles acute or almost winged.

* *Ribs or angles twice as many as calyx-lobes, the shorter alternating ones terminating at the sinuses of the lobes, those of the longer ones extending over the lobes. Petals large.*

\+ Inflorescence and calyx covered with a floccose tomentum. Calyx-lobes terminating in a bristle or short mucro.

Adult leaves glabrous, acuminate; tomentum rusty-coloured; petals on short claws, not fringed, ... *L. floribunda.*
Adult leaves puberulous beneath, acuminate; tomentum whitish or yellowish; petals on long slender claws, ciliolate, ... *L. tomentosa.*
As preceding, but leaves mucronate or acute; flowers twice as large; petals conspicuously fringed, ... *L. Loudoni.*

× × Inflorescence and calyx pruinous, or minutely whitish or greyish puberulous, all other parts glabrous.

Leaves whitish glaucous beneath; calyx 10—12-angular, the angles acute, ..*L. hypoleuca.*
Leaves green; calyx plicately-sulcate, the ribs very obtuse and broader than the furrows, ... *L. flos-reginæ.*
Leaves green; calyx longitudinally furrowed, without ribs, ... *L. macrocarpa.*

* * *Angles of calyx as many as plain lobes and alternating with them. Petals minute.*

All softer parts greyish pubescent; angles of calyx almost winged; flowers small, ..*L. villosa.*

1. L. PARVIFLORA, Roxb. Corom. Pl. I. 28. t. 66. and Fl. Ind. II. 505; Wight Icon. t. 69; Griff. Not. Dicot. 510. t. 592; DC. Prod. III. 93; Bedd. Fl. Sylv. t. 31.

HAB. Ava.—Fl. April.

*2. L. Indica, L. sp. pl. 734; Bot. Mag. t. 405; Roxb. Fl. Ind. II. 505; WA. Prod. I 308; Wight Ill. I. t. 86; Bl. Mus. Lugd. Bat. II. 125; Miq. Fl. Ind. Bat. I/1, 622.

Hab. Generally planted in villages, but nowhere wild; (apparently wild in the Yunan-hills).—Fl. May, June.

3. L. calyculata, Kurz in Journ. As. Soc. Beng. 1872. 307.

Hab. Rather rare in the tropical forests of Martaban east of Tounghoo.—Fr. March, April.

4. L. floribunda, Jack in Mal. Misc. I. 38; DC. Prod. III. 93; Miq. Fl. Ind. Bat. I/1, 624; Bl. Mus. Lugd. Bat. II. 126. t. 41; Griff. Not. Dicot. 509.

Hab. In the tropical forests along the Salween in Martaban and in Tenasserim from Moulmein southwards; also Andamans.—Fl. July, Aug.

5. L. tomentosa, Presl Bot. Bemerk. 142; Walp. Ann. I. 295.

Hab. Frequent in the tropical and moister upper mixed forests, all over Pegu and Martaban down to Tenasserim.—Fl. April, May; Fr. May, June.

6. L. Loudoni, Teysm. and Binend. in Natuurk. Tydsch. Ned. Ind. XXIV. 331.

Hab. In the adjoining Siamese province of Kanbooree, in eng-forests. —Fl. HS.

7. L. hypoleuca, Kurz in Journ. As. Soc. Beng. 1872. 307.

Hab. Frequent in the tropical and moister upper mixed forests of the Andamans.—Fl. June, July; Fr. CS.

8. L. flos-reginæ, Retz. Obs. Bot. I. 20. (1779). (*L. Reginæ*, Roxb. Corom. Pl. I. 46. t. 65. (1795). and Fl. Ind. II. 505; DC. Prod. III. 93; Bl. Mus. Lugd. Bat. II. 126. t. 41; WA. Prod. I. 308; Wight Icon. t. 413; Miq. Fl. Ind. Bat. I/1, 623; Bedd. Fl. Sylv. t. 29; *Adambea glabra*, Lamk. Encycl. Bot. I. 39. (1783); *Ketmia Indica*, Burm. Thesaur. Zeyl. 137. (1737) non L.).

Hab. Common in the mixed forests and savannahs all over Burmah and the adjacent provinces.—Fl. HS.; Fr. CS.

9. L. macrocarpa, Wall. Cat. 2114; Voigt Hort. Calc. 132.

Hab. Frequent in the open, especially the low, forests, from Ava, Pegu and Martaban down to Tenasserim.—Fl. HS.; Fr. CS.

10. L. villosa, Wall. in Journ. As. Soc. Beng. 1873. 234.

Hab. Not unfrequent in the tropical and moister upper mixed forests of the Pegu Yomah and Martaban.—Fl. June.

Duabanga, Ham.

1. D. grandiflora, (*Lagerstræmia grandiflora*, Roxb. Hort. Beng. 38 and Fl. Ind. II. 503; DC. Prod. III. 93; Bl. Mus. Lugd. Bat. II.

125; *D. sonneratioides*, Buch. in Linn. Trans. XVII. 178; Hf. Illustr. Him. Pl. t. 11; Walp. Ann. II. 540; *Leptospartion grandiflorum*, Griff. Not. Dicot. 511. t. 591).

Hab. Frequent in the mixed forests, especially the upper ones, also in the tropical forests, all over Burmah, from Chittagong and Ava down to Tenasserim and the Andamans.—Fl. March, April; Fr. May.

Sonneratia, L. f.

Conspectus of Species.

* *Stigma infundibuliform-capitate, small.*
× Petals linear-lanceolate, dark purple.
Calyx terete, 6—8-lobed; leaves obovate, broad, ... *S. acida.*
× × Petals none.
Calyx in bud elliptically oblong, acute, the tube at first obscurely, then strongly 6—8-angular, ... *S. alba.*
Calyx in bud ovoid, obtuse, the tube terete, ... *S. Griffithii.*
* * *Stigma large, nearly 3 lin. in diameter, conically umbrella-shaped.*
Calyx 4-lobed; petals none; leaves oblong to lanceolate, ... *S. apetala.*

1. S. acida, L. f. Suppl. 252; DC. Prod. III. 235; Roxb. Fl. Ind. II. 506; WA. Prod. I. 327; Wight Icon. t. 340; Griff. Not. Dicot. 652; Miq. Fl. Ind. Bat. I/1, 496.

Hab. Frequent in the littoral forests all along the coasts, from Chittagong down to Tenasserim and the Andamans.—Fl. H. and RS.; Fr. CS.

2. S. alba, Smith in Rees Cycl. V. 23; DC. Prod. III. 231; Miq. Fl. Ind. Bat. I/1, 497. (*Mangium album*, Rumph. Herb. Amb. III. 111. t. 73).

Hab. On the sea-shore of the Andamans.—Fl. April, May.

3. S. Griffithii, Kurz in Journ. As. Soc. Beng. 1871. 56. (*S. alba*, Griff. Not. Dicot. 652.)

Hab. Frequent in the littoral, especially the tidal forests of Pegu and Tenasserim.—Fl. April, May.

4. S. apetala, Buch. in Sym. Emb. to Ava III. 313. t. 25; DC. Prod. III. 231; WA. Prod. I. 327; Roxb. Fl. Ind. II. 506; Griff. Not. Dicot. 650. t. 636. f. 4.

Hab. Common in the tidal forests, less so in the mangrove swamps, all along the coasts from Chittagong down to Tenasserim; Ava (Mrs. Burney) is there no mistake?—Fl. June, July; Fr. RS.

GRANATEÆ.

Punica, L.

*1. P. Granatum, L. sp. pl. 676; DC. Prod. III. 3; WA. Prod. I. 327; Roxb. Fl. Ind. II. 499; Bot. Mag. t. 1832. AB.; Wight Illust. II. t. 97; Griff. Not. Dicot. 641. t. 634.

Hab. Ava, much planted from Mandalay northwards.—Fl. Jan., Febr.

ONAGRARIEÆ.

Conspectus of Species.

* *Ovary* 2—6-*celled, the cells many-ovuled. Capsules dehiscing loculicidally or septicidally, many-seeded. Usually terrestrial herbs.*

Jussiæa. Stamens twice as many as petals. Ovary 4-celled. Capsule septicidal.

Ludwigia. Stamens as many as petals. Ovary 3—6-celled. Capsule septicidal.

* * *Ovary* 1—4-*celled, the cells* 1-(*rarely* 2—4-) *ovuled. Nut* 1—4-*celled,* 1—4-*seeded.*

Trapa. Flowers 4-merous. Ovary 2-celled. Nuts with 2 or 4 spines or horns. Floating herbs.

Jussiæa, L.

Conspectus of Species.

Creeping or floating herb; flowers usually 5-merous, white, long-pedicelled; seeds large, spongy, ... *J. repens.*

Erect, terrestrial; flowers mostly 4-merous, very shortly pedicelled or almost sessile; seeds minute, crustaceous, glossy, ... *J. suffruticosa.*

1. J. repens, L. sp. pl. 550 and Mant. 381; DC. Prod. III. 54; WA. Prod. I. 335; Roxb. Fl. Ind. II. 401; Rheed. Hort. Malab. II. t. 51. (*J. Swartziana*, DC. l. c.; *J. floribunda*, Griff. Not. Dicot. 680).

Var. *α.* glabriuscula, all parts more or less glabrous; peduncles smooth; ovary puberulous or almost glabrous.

Var. *β.* vestita, all parts, more especially the peduncles, more or less softly hairy or pubescent; ovary more or less woolly.

Hab. Both forms frequent in and around ponds, lakes, swamps, &c., also in rice-fields and quietly running streams, all over Burma down to Tenasserim.—Fl. Jan. to April; Fr. April, May.

2. J. suffruticosa, L. sp. pl. 555; Miq. Fl. Ind. Bat. I/1, 628; Bth. Fl. Austr. III. 307.

Var. *α.* genuina, (*J. angustifolia*, Lamk. Dicot. III. 331 and Ill. t. 280. f. 3; DC. Prod. III. 55; *J. exaltata*, Roxb. Fl. Ind. II. 401; *J. suffruticosa*, L. l. c.; *J. Blumeana*, DC. Prod. III. 331; Miq. Fl. Ind, Bat. I/1, 627; *J. longipes*, Griff. Not. Dicot. 689; *J. Burmanni*, DC. l. c. 57), all parts simply appressed pubescent or almost glabrous, the capsules narrower.

Var. *β.* villosa, Miq. Fl. Ind. Bat. I/1, 628 (*J. villosa*, Lamk. Encycl. Méth. III. 331; DC. Prod. III. 57; WA. Prod. I. 336; *J. fruticosa*, DC. l. c.; Rheed. Hort. Malab. II. t. 50.), all parts more densely villous, the capsules usually thicker and more pubescent.

Hab. Both varieties common on mud-banks of rivers, around tanks, in swamps and rice-fields, &c., all over Burma down to Tenasserim.—Fl. Fr. March—May.

Ludwigia, L.

Conspectus of Species.

Capsules from oblong to elongate-cylindrical, thick; seeds densely covering the placentas, ... *L. parviflora.*
Capsules almost filiform; seeds in a single row, ... *L. prostrata.*

1. L. PARVIFLORA, Roxb. Fl. Ind. I. 419; Schlechtd. in Coroll. Obs. Hort. Hal. 1854 and in Linn. XXVI. 479; Wight Ill. t. 101; WA. Prod. I. 336; DC. Prod. III. 59. (*L. perennis*, Miq. Fl. Ind. Bat. I/1, 629, non L.; *L. gracilis*, Miq. l. c.).

Var. *α.* ROXBURGHIANA, (*L. parviflora*, Roxb. l. c., &c.,) capsules sessile or nearly so, 4—6 in. long; calyx-lobes only half as long as the calyx-tube.

Var. *β.* LYTHROIDES, (*L. lythroides*, Bl. Bydr. 1134; DC. Prod. III. 59), capsules distinctly pedicelled, from obovate to almost turbinate or oblong, about 2—3 lin. long; calyx-lobes as long as the calyx-tube.

HAB. Var. *α.* here and there in Pegu and Martaban, along the larger rivers, as the Sittang &c.; var. *β.* frequent on mud-banks, in swampy places and rice-fields, around tanks and lakes, &c., all over Burma down to Tenasserim and the Andamans.—Fl. Fr. Sept.—May.

2. L. PROSTRATA, Roxb. Fl. Ind. I. 420; DC. Prod. III. 59; Wight Icon. t. 762. (*L. diffusa*, Ham. in Linn. Trans. XIV. 301; DC. l. c.; *Nematopyxis fruticulosa, pusilla* and *prostrata*, Miq. Fl. Ind. Bat. I/1. 630).

Var. *α.* LUXURIANS, plant erect and branched, the leaves much larger.

Var. *β.* HUMIFUSA, small, prostrate; leaves small, usually not above ½ in. long, more or less blunt.

HAB. Var. *α.* not unfrequent in wet places in Pegu and the Andamans; also Ava; var. *β.* on wet sand-banks of rivers, as the Toukyeghat river.—Fl. Fl. H. and RS.

Trapa, L.

Conspectus of Species.

Nut with 2 opposite reflexed bearded spines, ... *T. bispinosa.*
Nut with 2 pairs of opposite spines, ... *T. quadrispinosa.*

1. T. BISPINOSA, Roxb. Corom. Pl. III. t. 234 and Fl. Ind. I. 428; DC. Prod. III. 64; WA. Prod. I. 337; Rheed. Hort. Malab. XI. t. 33; Miq. Fl. Ind. Bat. I/1. 636).

HAB. In tanks of Chittagong; also Ava.

SAMYDACEÆ.

Conspectus of Species.

Trib. I. CASEARIEÆ. Calyx free, 5- or 4-merous. Petals none. Stamens 6—30, inserted in a single row to the calyx-tube, usually alternating with as many staminodes.

Guidonia. Stamens 6—15, alternating with as many short staminodes. Flowers clustered or in corymbs.

Trib. II. HOMALIEÆ. Calyx free or adnate to the ovary, 4—15-merous. Petals as many. Stamens 4—15, or if more arranged in clusters, but always opposite the petals.

Homalium. Petals as many as sepals. Ovary more or less adnate to the ovary and inferior.

Guidonia, Plum.

(Casearia, Jacq.)

Conspectus of Species.

* *Filaments very slender, many times longer than the anthers.*

† Stamens and staminodes 8 each, separately inserted.

All parts glabrous; leaves coarsely crenate; flowers about 2 lin. across; pedicels and calyx glabrous, ... *G. Canziala.*

Young shoots, calyx, and pedicels, and also often the nerves beneath of the serrulate leaves, puberulous; flowers only a line across, ... *G. glomerata.*

† † Stamens and staminodes 8 each, united at the base and forming a broad disk round the ovary.

All parts, also the flowers and pedicels, more or less tomentose or puberulous, .. *G. tomentosa.*

* * *Filaments only as long as the anthers.*

All parts more or less puberulous; stamens 8, ... *G. Vareca.*

1. G. Canziala *(Casearia Canziala,* Wall. ap. Voigt Hort. Calc. 78; *Casearia ovata,* Roxb. Fl. Ind. II. 428, non Willd.).

Hab. Frequent in the mixed forests, especially the lower ones, all over Pegu and Martaban.

Casearia Hamiltonii, Wall. Cat. differs in the crenate leaves, and in the number (10) of the stamens and staminodes.

2. G. glomerata, *(Casearia glomerata,* Roxb. Fl. Ind. II. 419; DC. Prod. II. 49).

Var. *α.* glabriuscula, leaves almost glabrous.

Var. *β.* puberula, leaves beneath on the nerves, the petioles &c., puberulous.

Hab. Var. *β.* Chittagong (Hf. and Th.).

3. G. Vareca, Baill. *(Casearia Vareca,* Roxb. Fl. Ind. II. 418; *C. Vareca,* Gærtn. Fr. I. t. 60).

Hab. Ava, Khakyen hills east of Bhamo (J. Anderson).—Fr. Apr.

Homalium, Jacq.

Conspectus of Species.

* *Stamens solitary and opposite to the petals. Flowers racemose or spiked, often collected into panicles.*

× Flowers about 2 lin. in diameter. Ovary villous.

Leaves coriaceous, tomentose or puberulous beneath; flowers tomentose, sessile; spikes robust, tomentose, ... *H. tomentosum.*

Leaves thin chartaceous, pubescent on the nerves; flowers tomentose, shortly pedicelled; racemes pubescent, slender, ... *H. Griffithianum.*

× × Flowers less than a line in diameter. Spikes collected into panicles.

All parts, also the spikes, quite glabrous; flowers sessile; ovary villous, .. *H. minutiflorum.*

* * *Stamens by 2 or more opposite to the petals.*

Quite like *H. Nepalense*, but stamens by threes; ovary tomentose; flowers longish pedicelled, in divaricate terminal glabrous panicles, ... *H. Schlichii.*

Glabrous; stamens by twos; ovary glabrous; racemes slender, glabrous,.. *H. fœtidum.*

1. H. TOMENTOSUM, Bth. in Linn. Proc. IV. 34. (*Blackwellia tomentosa*, Vent. Choix. t. 57; DC. Prod. II. 55; *Blackwellia spiralis*, Wall. in As. Research. XIII. 400 c. tab.; DC. Prodr. l. c.).

HAB. Frequent in the mixed forests all over Pegu, Arracan, and Martaban, up to 2000 ft. elevation.—Fl. Fr. Nov.—Jan.

2. H. GRIFFITHIANUM, Kurz in Journ. As. Soc. Beng. 1871. 57. (*Blackwelliæ* sp., Griff. Not. Dicot. 584. t. 585. A. f. 10; *Blackwellia dasyantha*, Turcz. in Bull. d. Nat. Mosc. 1863. 610).

HAB. Tenasserim, Mergui (Griff. 991).

This may possibly be *Astranthus Cochinchinensis*, Lour., Fl. Coch. 225 (= *Blackwellia*—Bl. Mus. Bot. II. 27).

3. H. MINUTIFLORUM, Kurz in Journ. As. Soc. Beng. 1827. 308.

HAB. Burma, probably Martaban or Tenasserim (Brandis).

Habit of *H. fœtidum*, but the flowers very minute.

4. H. SCHLICHII, Kurz, For. Fl. Burm. I. 532.

HAB. Forests of Chittagong (Dr. Schlich) Fl. CS.

5. H. FŒTIDUM, Bth. in Linn. Proc. IV. 37.—(*Blackwellia fœtida*, Wall.; Deless. Icon. III. 32. t. 53; *Ludia fœtida*, Roxb. Fl. Ind. II. 508).

HAB. Tenasserim, Mergui (Griff. *teste* Benth.).

TURNERACEÆ.

Turnera, L.

*1. T. ULMIFOLIA, L. sp. pl. 965 and Hort. Cliff. 122. t. 10.; DC. Prod. III. 346 (*T. angustifolia*, Curt. Bot. Mag. t. 281).

HAB. Disseminated from gardens and now often growing as wild in rubbishy places around the larger villages and towns, as Rangoon, Akyab, &c., Fl. Fr. CS.

PASSIFLOREÆ.

Conspectus of Genera.

Subord. I. PASSIFLOREÆ. Flowers hermaphrodite, or rarely unisexual and in this case the male and female corollas conform. Corona conspicuous, simple or double.

Tribe 1. *PASSIFLOREÆ.* Corona of the corolla simple or double and usually conspicuous. Petals usually herbaceous or coriaceous, rarely none.

Passiflora. Calyx-tube short. Petals 4—5, rarely none. Stamens 4—5. Styles 3. Leaves simple.

Subord. II. PAPAYACEÆ. Flowers hermaphrodite or unisexual. Stamens perigynous. Corona small or none.

Tribe 2. *MODECCEÆ.* Flowers hermaphrodite, or, if unisexual, the male and female corollas conform. Corona small or none. Petals usually included in the calyx-tube. Connective often produced beyond the anther-cells.

Modecca. Flowers unisexual. Calyx 5-cleft. Corona none or fringed. Disk-glands 5. Tendril-bearing herbs or shrubs.

Tribe 3. *PAPAYAEÆ.* Flower unisexual, the male and female corollas dissimilar, rarely polygamous. Corona none. Calyx minute. Male corolla tubular, the female one 5-petalled. Stamens in two rows, inserted to the corolla-tube. Erect trees, with milky juice.

Carica. Filaments free. Leaves simple, lobed or cut.

Passiflora, L.

Conspectus of Species.

Subg. 1. *Granadilla*, DC. Involucre 3-leaved, the leaflets entire or toothed, or dissected. Sepals and petals 5 each. Peduncles 1-flowered, arising together with the simple tendrils from the same leaf-axil.

* *Involucre-leaflets entire or toothed.*

Branches and branchlets wingedly 4-cornered; stipules and bracts entire; petiole with 4—6 glands; leaves entire, ... *P. quadrangularis.*

Branches &c., almost terete or slightly angular, never winged; stipules setaceous, long; bracts obovate, glandular-serrate at the tips; petiole 2-glanded at the apex; leaves entire, ... *P. laurifolia.*

* * *Involucre-leaflets pinnatifid-cut, the end-segments capillary or setaceous, glandular-thickened at the apex* (Dysosmia, DC.)

All parts hairy; leaves 3-lobed, the petiole gland-less, ... *P. foetida.*

Subg. 2. *Eu-Passiflora.* Flowers not involucred, the bracts remote, large, small or absent. Corona membranous, sharply folded, frilled at the edge.

* *Flowers bracted, the bracts small. Petals present.* (Decaloba, Endl.).

† Leaves lobed, velvety beneath.

Exactly as *P. Horsfieldii*, but leaves deeply 3-lobed and smaller, the lobes blunt, .. *P. caloneura.*

† † Leaves entire, glabrous.

Flowers small; petiole 1—2 in. long, 2-glanded at or about the middle; leaves glaucous beneath, acuminate, ... *P. Nepalensis.*

* * *Flowers apetalous, usually without bracts* (Cieca, Med.).

Flowers small; petiole $\frac{1}{4}$—$\frac{1}{2}$ in. long, 2-glanded at the apex; leaves acute, *P. suberosa.*

1. P. fœtida, Cav. Diss. 10. t. 289; DC. Prod. III. 331; Bot. Reg. t. 321; Bot. Mag. t. 2619.

Hab. Frequent in the more cultivated parts, especially in hedges, waste-places, and savannahs, of Chittagong and Ava to Arracan and Pegu.—Fl. Fr. Aug.—Jan.

N. B. *P. laurifolia*, L. (Bot. Reg. t. 13) and *P. quadrangularis*,

L. (Bot. Reg. t. 14; Bot. Mag. t. 2041) are frequently cultivated in gardens in Burma, and sometimes half-wild.

2. P. CALONEURA, Kurz MS.

HAB. Burma, probably Upper-Tenasserim or Martaban (Dr. Brandis).

The texture, nervature, and indument of the leaves are entirely those of *P. Horsfieldii*. Flowers and fruits unknown.

3. P. SUBEROSA, L. Amæn. Acad. I. 226; Mast. in Linn. Trans. XXVII. 630 (*P. Walkeriæ*, Wight Ill. t. 108.)

HAB. In hedges and in shrubbery of Chittagong.—Fl. Fr. RS.

Modecca, Lamk.

Conspectus of Species.

* *Petals inserted at the throat or to the tube of the calyx; stigmas sessile* (Microblepharis, Wight).

Leaves entire; seeds pitted, with crenate borders, ... *M. cordifolia.*

* * *Petals inserted on the bottom of the calyx. Style* 3-*cleft or styles* 3, *distinct.* (Blepharanthus, Wight).

Leaves 3- rarely 5-lobed; seeds pitted, with a doubled-crenate border, ... *M. trilobata.*

1. M. CORDIFOLIA, Bl. Bydr. 939; Rumph. I. 169. t. 49; Miq. Fl. Ind. Bat. I. 702.

HAB. Not unfrequent in open places of the tropical forests, especially along the coasts, of the Andamans.—Fl. Fr. April, May.

2. M. TRILOBATA, Roxb. Corom. Pl. III. t. 271 and Fl. Ind. III. 132.

HAB. Frequent in the tropical and moister mixed forests, especially in open places, but also in village-bushes, in hedges, along river-sides, &c. all over Burma, from Chittagong and Ava southwards.—Fl. Begin. of RS. Fr. end of RS.

Carica, L.

*1. C. PAPAYA, L. sp. pl. 1466; Roxb. Fl. Ind. III. 824; WA. Prod. I. 352; Bot. Reg. t. 459; Bot. Mag. t. 2898 and 2899; Griff. Not. Dicot. 570. t. 584. f. 2; Wight Ill. II. t. 106, 107; Maingay in Journ. Agr. Hort. Soc. India 1867. 184 cum icon. (*Papaya vulgaris*, DC. Prod. XV/1. 414).

HAB. Generally cultivated all over Burma, especially the southern provinces where it often springs up half-spontaneously in uncultivated places and along river-banks.—Fl. Fr. nearly ∞.

CUCURBITACEÆ.

Conspectus of Genera.

Trib. I. CUCURBITEÆ, Endl. Anthers 2-celled, the cells straight, curved or flexuose. Ovary with 3 (rarely 2 or 5) placentas; ovules horizontal, numerous.

* *Anther-cells flexuose or folded up (very rarely straight or only curved.)*

× Corolla rotate or bell-shaped, 5-petalled or 5-parted to the base. Filaments usually free.

\+ Petals cirrhiferous or fringed.

Hodgsonia. Ovules 12, in pairs attached to each side of the 2 parietal placentas. Seeds large, united by pairs. Leaves lobed, coriaceous.

Trichosanthes. Ovules and seeds very numerous, the later variously shaped, small or large. Petals fringed or rarely entire or nearly so, white. Leaves entire or lobed.

\+ \+ Petals entire.

† Calyx-tube of males elongate. Stamens inserted in the calyx-tube, included, the anthers cohering into an oblong head.

Gymnopetalum. Stigmatic lobes of female flowers linear, simple. Tendril simple. Fruit small, pulpy within. Corolla yellow.

Lagenaria. Stigmatic lobes of female flowers 2-lobed. Tendrils 2-cleft. Fruit with a woody rind. Petiole 2-glanded at the apex.

† † Male calyx-tube short (very rarely long). Stamens inserted at the mouth or in the tube of the calyx, usually exserted, the anthers free or slightly cohering.

O Stamens inserted at the mouth of the calyx; filaments exserted, recurved; anthers free, the cells bordering the broad connective.

Luffa. Male flowers racemose. Fruit dry, with a woody-fibrose endocarp, dehiscing by an apical circumsciss opercle. Petiole without glands.

Benincasa. Male and female flowers solitary. Fruit fleshy, berry-like, pulpy inside. Tendrils 2—3-cleft. Petiole without glands.

O O Stamens inserted below the mouth of the calyx; anthers conniving or cohering.

‡ Calyx furnished with 1—3 scales at the bottom.

Momordica. Calyx with 2 or 3 scales. Male flowers usually furnished with a large complicate bract subtending the pedicel. Tendrils simple.

Thladiantha. Calyx with a single scale. Bracts of male flowers dimorphous, the inner ones smaller and imperfect.

‡ ‡ Calyx without scales.

Cucumis. Connective produced beyond the anther-cells. Tendrils simple.

Citrullus. Connective not prolonged. Stigmas reniform. Tendrils usually 2—3-cleft.

× × Corolla bell-shaped, 5-lobed to the middle or somewhat further down.

Cephalandra. Male flowers solitary or nearly cymose. Stigmas narrow, 2-lobed or -parted. Tendrils simple.

Cucurbita. Flowers solitary. Calyx-lobes spreading. Filaments free. Stigmas 3, 2-lobed or 2-forked. Tendrils usually 2- or more-cleft.

* * *Anther-cells straight or curved, not flexuose.*

× Style inserted on a cupular or annular disk.

Bryonia. Male flowers racemose or clustered. Filaments short, the connective not produced. Berry spherical, shortly peduncled.

Muckia. Male flowers solitary or clustered. Calyx bell-shaped. Connective produced beyond the anther-cells. Berry spherical, sessile. Seeds scrobiculate.

Zehneria. Male flowers usually corymbose. Filaments elongate; anthers orbicular, the connective not produced, villous on the back. Berry shortly peduncled.

Melothria. Male flowers usually racemose. Anthers almost sessile, the connective produced beyond the anther-cells and usually 2-lobed. Berry usually long- and slender-peduncled.

× × Disk at the base of the style absent or obsolete.

Rhynchocarpa. Ovary with 1—3 placentas. Berry few-seeded, beaked. Connective produced beyond the anther-cells.

Ctenolepis. Calyx-tube short, the lobes subulate. Ovary with 2 or 3 placentas. Fruit oblique, few-seeded. Seeds concave-convex. Petiole furnished with a basilar pectinate leaflet. Connective not produced.

Trib. II. CREMOSPERMÆ. Anthers 1-celled. Ovary 1- or 3-celled; ovules 2 to many, suspended.

* *Seeds not winged.*

Subtrib. 1. *GYNOSTEMMEÆ.* Stamens 3 or 5, the filaments free or united. Ovary 3-celled, with 1 or 2 pendulous ovules in each cell.

Gynostemma. Petals lanceolate. Stamens 5, the filaments united. Berry globular. Leaves pedately 5-foliolate.

Subtrib. 2. *GOMPHOGYNEÆ.* Stamens 5; filaments free. Ovary 1-celled, with 2—6 ovules suspended from, or near, the summit of the cell.

Actinostemma. Petals caudate-acuminate. Fruit almost globose, dehiscing by an apical opercle. Leaves hastate-cordate.

Gomphogyne. Petals oblong, erose. Fruit turbinate, broadly 3-angular and 3-valved at the apex. Leaves pedately 5—7-foliolate.

* * *Seeds winged.*

Subtrib. 3. *ZANONIEÆ.* Stamens 5; filaments free; anthers oblong. Ovary 1-celled, with 3 thick parietal placentas; ovules numerous. Fruit dry, 1-celled, with a broad open 3-angular mouth at the top.

Alsomitra. Calyx-lobes 5. Stamens 4, perfect. Styles 3, the stigmas 2-lobed. Leaves 3-foliolate.

Zanonia. Calyx-lobes 3. Styles 3, 2-cleft. Leaves simple.

Hodgsonia, Hf. and Th.

1. H. heteroclita, Hf. and Th. in Linn. Proc. Nov. 1853; Hf. Ill. Him. Pl. t. 1—3; Fl. d. serr. t. 1262-63; (*Trichosanthes heteroclita*, Roxb. Fl. Ind. III. 705).

Hab. Not unfrequent in the tropical forests, especially along choungs, of the eastern slopes of the Pegu Yomah, and in Martaban, up to 2000 ft. elevation; also Chittagong.—Fl. Fr. March, April.

Trichosanthes, L.

Conspectus of Species.

Subg. 1. *Eu-Trichosanthes.* Petals conspicuously fringed. Male flowers racemose.

* *Male racemes without or with minute bracts, the bracts hardly a line long and inconspicuous. Seeds imbedded in a red or yellowish pulp, grooved or tuberculed, with thickened crenate or waved margins.*

× Leaves more or less deeply palmately lobed.

\+ Male racemes without bracts.

Fringes of the petals simple and straight; fruits ovate, acuminate; margin of seeds thickened and crenate, ... *T. cucumerina.*

\+ + Male racemes minutely bracted.

Fringes of petals simple, curled; fruits elongate, spindle-shaped, ... *T. anguina.*

Fringes of petals jagged; fruits oblong, acuminate; seeds thick and irregularly tubercled, ... *T. lobata.*

× × Leaves cordate, not lobed.

Leaves pubescent; seeds with a central longitudinal ribbon, the lateral lobes truncate, .. *T. reniformis.*

* * *Male racemes conspicuously bracted, the bracts leafy, 3 lin. to 1½ in. long and longer. Seeds imbedded in a dirty dark-green pulp, smooth, with entire margins.* (Involucraria, Sering.)

Petals fringed with very long simple curled cilia; bracts of male flowers large and broad, 1—1½ in. long; calyx-lobes lanceolate, entire; leaves usually palmately and very deeply lobed; fruits large, oval-oblong, compressed, .. *T. grandibracteata.*

Fringes of petals very long and simple; bracts of male flowers usually smaller; calyx-lobes broadly ovate, serrate; leaves angular or palmately lobed; fruits globose, .. *T. bracteata.*

Petals to near their middle cut into numerous jagged segments, not fringed; female flowers not tubular; fruits globose; leaves cordate, usually not lobed, *T. cordata.*

As preceding but leaves larger and slightly angular, the tube of the female flowers 1½ in. long, ... *T. macrosiphon.*

Subg. 2. *Pseudo-Trichosanthes.* Flowers dioecious, of both sexes solitary in the leaf-axils, the female ones very shortly peduncled or almost sessile, the males on slender pedicels.

* *Petals with very long curled branched fringes.*

Leaves cordate, not lobed; fruits oblong; seeds almost globular, ... *T. dioica.*

* * *Corolla-lobes entire or only slightly lacerate.*

Leaves reniform; fruits globular or nearly so; seeds elliptically oblong, .. *T. integrifolia.*

*1. T. CUCUMERINA, L. sp. pl. 1432; DC. Prod. III. 315; Roxb. Fl. Ind. III. 702; Miq. Fl. Ind. Bat. I/1. 676; Naud. in Ann. d. sc. nat. 4 ser. XVIII. 191; Bth. Fl. Austr. III. 314.

HAB. Generally cultivated all over Burma, especially in the plains, and sometimes half wild along the larger rivers in cultivated lands, in hedges, around villages, &c.—Fl. Fr. Sept.—Jan.

2. T. LOBATA, Roxb. Fl. Ind. III. 703.

HAB. Here and there in hedges near Chittagong.—Fl. Fr. CS.

*3. T. ANGUINA, L. sp. pl. 1430; Bot. Mag. t. 722; DC. Prod. III. 314; Naud. in Ann. d. sc. nat. 4th ser. XVIII. 190; WA. Prod. I. 350; Miq. Fl. Ind. Bat. I/1. 678; Bot. Mag. t. 722. (*Petola anguina*, Rumph. Herb. Amb. V. t. 148; *T. colubrina*, Jacq. Ecl. t. 128; DC. l. c.).

HAB. Burma, cultivated (according to Dr. Mason).

4. T. RENIFORMIS, Miq. Fl. Ind. Bat. I/1. 675 ; Kurz in Journ. As. Soc. Beng. 1871. 57.

HAB. Andamans, in open places of the forests on Rutland island.

5. T. BRACTEATA, Voigt Cat. Hort. Calc. 58. (*Modecca bracteata*, Lamk. Encyl. Meth. IV. 210 ; DC. Prod. III. 337 ; *T. palmata*, Roxb. Fl. Ind. III. 704 ; WA. Prod. I. 350 ; Wight Ill. II. t. 104, 105.)

HAB. Frequent in all mixed forests, amongst shrubbery and in bushes along rivers, in hedges, &c., also in the savannahs, all over Burma as far down as Tenasserim and the Andamans.—Fl. May—Octob. ; Fr. April, May.

6. T. GRANDIBRACTEATA, Kurz MS.

HAB. Ava, along the Irrawaddi northwards from Mandalay ; also Khakyen-hills east of Bhamo.—Fl. July.

7. T. CORDATA, Roxb. Fl. Ind. III. 703.

HAB. Not unfrequent in the savannahs and in the savannah-forests along the Sittang in Pegu.—Fl. May, June.

8. T. MACROSIPHON, Kurz in Journ. As. Soc. Beng. 1872. 308.

HAB. Upper Tenasserim, Attaran (Dr. Brandis).

9. T. INTEGRIFOLIA, (*Cucumis integrifolius*, Roxb. Fl. Ind. III. 724 ; *Gymnopetalum integrifolium*, Kurz in Journ. As. Soc. Beng. 1871. 58).

HAB. Frequent along the banks of rivers and choungs all over Pegu and Martaban ; also Ava.—Fl. Febr.—April ; Fr. May.

Gymnopetalum, Arn.

Conspectus of Species.

Subg. 1. *Eu-Gymnopetalum.* Dicœcious. Male flowers in long-peduncled racemes, destitute of bracts. Fruits not ribbed. Flowers yellow.

Subg. 2. *Scotanthus*, Naud. Monœcious. Male flowers in bracted racemes. Fruit ribbed. Flowers white.

Leaves cordate, 3—5-angular ; female flowers long-peduncled ; fruits ovoid, .. *G. Cochinchinensis.*

Leaves palmately and deeply 3—5-lobed, the lobes blunt ; fruits clavate-cylindrical, .. *G. heterophyllum.*

1. G. COCHINCHINENSE, Kurz in Journ. As. Soc. 1871. 57. (*Bryonia Cochinchinensis*, Lour. Flor. Coch. 595 ; DC. Prod. III. 305 ; *Momordica tubiflora*, Roxb. Fl. Ind. III. 711 ; *Scotanthus tubiflorus*, Naud. in Ann. d. sc. nat. 4 ser. XVI. 173. t. 3).

HAB. Not unfrequent in cultivated and rubbishy places in Chittagong and Arracan ; Ava ; Tenasserim.—Fl. Fr. Octob.

2. G. HETEROPHYLLUM, Kurz in Trim. Journ. Bot. 1875. 326.

HAB. Frequent in the tropical and moister upper mixed forests, especially on damp rocks and tree-stems along choungs, from Martaban down to Tenasserim and the Andamans.—Fl. Fr. Febr., March.

May possibly be an obtuse-lobed and smaller bracted form of *G. quinquelobum*, Miq. Fl. Ind. Bat. I/1. 681.

Lagenaria, Ser.

*1. L. VULGARIS, Ser. in DC. Prod. III. 299; WA. Prod. I. 341; Wight Ill. t. 105/bis f. 7; Miq. Fl. Ind. Bat. I/1. 669. (*Cucurbita Lagenaria*, L. sp. pl. 1434; Roxb. Fl. Ind. III. 718; Rheed. Hort. Malab. VIII. t. 1. 4. 5; Rumph. Herb. Amb. V. 393. t. 144; *L. idolatrica*, Ser. in DC. l. c.; Miq. l. c.).

Var. *α.* VULGARIS, all parts softly, but not viscidly, pubescent; fruits flask-shaped.

Var. *β.* IDOLATRICA, (*L. idolatrica*, Ser. l. c.), all parts viscid-pubescent; fruits pear-shaped.

HAB. Generally cultivated all over Burma, but more copiously in Ava and Prome.—Fl. March; Fr. CS.

Luffa, Cav.

Conspectus of Species.

* *Fruit smooth, at least not muricate or echinate.*

Fruit terete, or only with obscure darker coloured longitudinal streaks, . . *L. cylindrica.*
Fruit sharply 10-angular, ... *L. acutangula.*

* * *Fruit echinate or muricate.*

Flowers monœcious, yellow, the males and females from the same leaf-axil, very shortly pedicelled; fruit muricate, ... *L. graveolens.*
Flowers dicœcious, white, the males in racemes, the females solitary; fruits densely echinate, the bristles spreadingly fibrillose or rarely ciliate, ... *L. echinata.*

1. L. CYLINDRICA, Ræm. Syn. Monog. Pep. II. 63; Naud. in Ann. d. sc. nat. 4 ser. XII. 119 cum. syn. numer. (*Momordica cylindrica*, L. sp. pl. 1433; *L. Petola*, and *L. Cattu-Picinna*, Ser. in DC. Prod. III. 303; *L. Aegyptiaca*, Mill. Dict.; DC. l. c.; Bth. Fl. Austr. III. 316; *L. pentandra*, Roxb. Fl. Ind. III. 712; WA. Prod. I. 343; Wight Icon. t. 499; *L. clavata*, Roxb. Fl. Ind. III. 714?).

Var. *α.* LEIOCARPA, Naud. l. c., flowers smaller; stamens 5; fruits elongate-oblong to clavate-cylindrical, 1—1½ ft. long; seeds pale-coloured or black.

Var. *β.* HEDERACEA, (*L. hederacea*, Wall. MS.), leaves usually smaller, more scabrous; stamens 3; fruits oblong to elliptical, 2—4 in. long, rarely longer; seeds black.

HAB. Var. *β.* common in all leaf-shedding forests, in the savannahs, in hedges, rubbishy places, village-bushes, &c., all over Burma down to Tenasserim and the Andamans; var. *β.* much scarcer.—Fl. Close of RS.; Fr. CS.

The varieties of this species require further investigation.

*2. L. ACUTANGULA, Roxb. Fl. Ind. III. 713; DC. Prod. III. 302; Naud. in Ann. d. sc. nat. 4 ser. XII. 122; Miq. Fl. Ind. Bat. I/1. 668. (*L. fœtida*, Cav. Icon. I. 7. t. 9—10; DC. l. c.; Bot. Mag. t. 1638; *Cucumis acutangulus*, L. sp. pl. 1436; *Petola Bengalensis*, Rumph. Amb. V. t. 149; Rheed. Hort. Malab. VIII. t. 7).

HAB. Cultivated by natives in Chittagong.

Luffa amara, Roxb., with oblong fruits only 3—4 inches long and tapering at both ends, is probably only a variety of the above.

3. L. GRAVEOLENS, Roxb. Fl. Ind. III. 716; Naud. in Ann. d. sc. nat. 4 ser. XII. 124.

HAB. In rubbishy places in a village near Chittagong.—Fl. Fr. Octob.

4. L. ECHINATA, Roxb. Fl. Ind. III. 715; Walp. Rep. II. 200; WA. Prod. I. 343; Naud. in Ann. d. sc. nat. 4 ser. XII. 128. *(L. Bindaal*, Roxb. Fl. Ind. III. 717; Edg. in Linn. Proc. IX. 322 *(L. Bandaal)*.

HAB. Arracan, in hedges and rubbishy places in the Kolodyne valley. —Fl. Fr. Octob.

Dr. Hooker (in Fl. trop. Afr. II. 531) states that the flowers in Indian specimens of this species are always yellow, not white as Roxburgh describes and figures them. The species is common enough in the plains of Northern Bengal but never have I seen the flowers of it other than white.

Benincasa, Savi.

*1. B. CERIFERA, Savi Mem. sopra Piant. Cucurb. I. 1818. 6. cum icon.; DC. Prod III. 303; Naud. in Ann. d. sc. nat. 4 ser. XII. 87; Miq. Fl. Ind. Bat. I/1. 665. Jacq. Ecl. pl. t. 153-54. (*Cucurbita Pepo*, Lour. Coch. 593; Roxb. Fl. Ind. III. 718; Rumph. Herb. Amb. V. t. 143; Rheed. Hort. Malab. VIII. t. 3).

HAB. Generally cultivated by the natives.—Fl. RS.; Fr. CS.

Momordica, L.

Conspectus of Species.

* *Monœcious. Bracts only* 2—3 *lin. long, at about the middle of the filiform peduncle.*

Leaves palmately 5-lobed; calyx-lobes oblong, acute; bracts entire, at the apex of the peduncle; fruit few-seeded, small, ... *M. Charantia.*

As preceding, but bracts minutely toothed, below or near the middle of the peduncle; fruit larger, many-seeded, ... *M. balsamina.*

* * *Dicœcious. Bract of the male (and sometimes of the female) flowers just below the flower and embracing the calyx,* $\frac{1}{3}$—1 *in. long or longer.*

Leaves 3- to 5-lobed; calyx-lobes linear, acuminate; seeds about 3 lin. long, *M. dioica.*

Leaves cordate, not lobed or only angular; bracts pubescent or velvety; calyx-lobes oblong, blunt; seeds about 3 lin. long, ... *M. subangulata.*

Leaves 3- rarely 5-lobed, with the lobes acuminate; bracts often hirsute; calyx-lobes oblong, acuminate; seeds about an inch long, ... *M. Cochinchinensis.*

*1. M. Charantia, L. sp. pl. 1433; Roxb. Fl. Ind. III. 707; DC. Prod. III. 311; Bot. Mag. t. 2455; Fl. d. serr. t. 1047; WA. Prod. I. 348; Wight Icon. t. 504; Naud. in Ann. d. sc. nat. 4 ser. XII. 131; Miq. Fl. Ind. Bat. I/1. 663. (*M. muricata*, Willd. sp. pl. IV. 602; Roxb. Fl. Ind. III. 707; WA. Prod. I. 348; Miq. l. c.; *M. Senegalensis*, Lamk. Encycl. IV. 239; DC. l. c.; *Cucumis Africanus*, Ldl. Bot. Reg. XII. t. 980; *Amara Indica*, Rump. Herb. Amb. V. t. 151; Rheed. Hort. Malab. VIII. t. 9—19.).

Hab. Generally cultivated all over Burma, and frequently seen like wild in deserted toungyas and gardens, in rubbishy places around villages, &c.—Fl. Fr. C. and HS.

2. M. dioica, Roxb. Fl. Ind. III. 709; DC. Prod. III. 312; WA. Prod. I. 349; Wight Icon. t. 505—506; Dene. in Jacq. Voy. IV. 60. t. 71.; Naud. in Ann. d. sc. nat. 4 ser. XII. 133.

Hab. Burma (according to Rev. Dr. Mason).

3. M. subangulata, Bl. Bydr. 928; Miq. Fl. Ind. Bat. I/1. 664.

Hab. Chittagong (H. Bruce); Pegu and Prome (Wall. Cat. 6743). —Fl. Sept.

4. M. Cochinchinensis, Spreng. Syst. Veg. III. 14. (*Muricia Cochinchinensis*, Lour. Fl. Coch. II. 732; DC. Prod. III. 318; *M. mixta*, Roxb. Fl. Ind. III. 709; WA. Prod. III. 349; Bot. Mag. t. 5145; Fl. d. serr. XIV. t. 1478; Naud. in Ann. d. sc. nat. 4 ser. XII. 132; Miq. Fl. Ind. Bat. I/1. 664; *Zucca Commersiana*, Ser. in DC. l. c. 319).

Hab. Not unfrequent in the tropical forests, especially along choungs, of the eastern and southern slopes of the Pegu Yomah, and from Martaban to Tenasserim.—Fl. Jan.—March.

Thladiantha, Bunge.

1. T. dubia, Bung. Enum. Pl. Chin. Bor. 29; Walp. Rep. V. 763; Naud. in Ann. d. sc. nat. 4 ser. XII. 150; Bot. Mag. t. 5469. (*Gymnopetalum Horsfieldii*, Miq. Fl. Ind. Bat. I/1. 680.)

Hab. Frequent along banks of choungs, especially along the borders of hill-toungyas and savannahs, of the Pegu Yomah.—Fl. March, April.

Cucumis, L.

Conspectus of Species.

× Flowers on slender pedicels, several together in the axils of the leaves.

Ovary muricate, spindle-shaped; male flowers by 3—6, females solitary, ... *C. sativus.*

Ovary densely villous or pubescent, usually oblong or elliptical; male and female flowers usually mixed, ... *C. Melo.*

× × Flowers all singly from the leaf-axils, on stiff, rather short peduncles.

Flowers inconspicuous, ... *C. trigonus.*

*1. C. SATIVUS, L. sp. pl. 1437 ; DC. Prod. III. 300 ; Naud. in Ann. d. sc. nat. 4 ser. XI. 27 ; Roxb. Fl. Ind. III. 720.—(*C. Momordica*, Roxb. l. c. ; *C. sativus var. Sikkimensis*, Hf. Bot. Mag. t. 6206 ?)

HAB. Much cultivated, especially in the plains.—Fl. Jan.

2. C. MELO, L. sp. pl 1436 ; DC. Prod. III. 300 ; WA. Prod. I. 341 ; Roxb. Fl. Ind. III. 720 ; Naud. in Ann. d. sc. nat. 4 ser. XI. 34. c. syn. plurimis. (*C. deliciosus*, Roth; *C. Conomon*, Thbg. ; *C. flexuosus*, L. ; *C. Chate*, L. and *C. Dudaim*, L. Andr. Repos. VIII. t. 548, ap. Sering. in DC. Prod. l. c. ; *C. utilissimus*, Roxb. Fl. Ind. III. 321 ; WA. Prod. I. 342 ; *C. cicatrisatus*, Stocks in Hook. Kew Gard. Misc. IV. 148 ; Walp. Ann. IV. 864).

Var. *α.* PUBESCENS (*C. pubescens*, Willd. sp. pl. IV. 614 ; Wight Icon. t. 496 ; WA. Prod. I. 342 ; Roxb. Fl. Ind. III. 723 ; DC. Prod. III. 301 ; Royle Ill. Him. Pl. I. 220. t. 47. f. 1 ; *C. Melo agrestis*, Naud. in Ann. d. sc. nat. 4 ser. XI. 73 ; C. *trigonus*, Bth. Fl. Austr. III. 317, vix. Roxb. ; *C. Maderaspatanus*, Roxb. Fl. Ind. III. 723, non L. ; *C. turbinatus*, Roxb. l. c. ?, lobis calycinis subulatis et tubo supra ovario valde constricto insignis), all parts much smaller ; fruits only as large as a plum, from oblong to turbinate, not edible ; flowers smaller and shorter pedicelled, usually only by 2—3 in the leaf-axils.—Considered by Naudin to be the wild stock of the cultivated melons.

Var. *β.* CULTA (cf. syn. sub specie citat. et var. numerosissimæ ap. Naud. l. c.), all parts more robust ; fruits larger and often very large, variously shaped ; flowers nearly an inch across, on long filiform pedicels, usually by 3—5 from the leaf-axils.

HAB. Var. *α.* not unfrequent along banks of rivers, in uncultivated and rubbishy places, etc., all over Ava, Chittagong and Pegu ; var. *β.* generally cultivated in several varieties.—Fl. H. & R. S ; Fr. DS.

Citrullus, Schrad.

*1. C. VULGARIS, Schrad. in Linnæa XII. 412 ; Naud. in Ann. d. sc. nat. 4. ser. XII. 100 cum syn. numerosis. (*Cucurbita Citrullus*, L. sp. pl. 1435 ; Roxb. Fl. Ind. III. 719 ; WA. Prod. I. 351 ; *Cucumis Citrullus*, Ser. in DC. Prod. III. 301 ; *C. fistulosus*, Stocks in Hook. Journ. Kew. Gard. Misc. III. 74. t. 3 ; Walp. Ann. IV. 863 ; *Anguria Indica*, Rumph. Herb. Amb. V. t. 146).

HAB. Much cultivated all over the country.—Fl. Jan., Febr. ; Fr. HS.

Cephalandra, Schrad.

1. C. GRANDIS (*Bryonia grandis*, L. Mant. 126 ; DC. Prod. III. 305 ; *Momordica monadelpha*, Roxb. Fl. Ind. III. 708 ; *Coccinia Indica*, WA. Prod. I. 347 ; Wight Ill. II. t. 105 ; Dene. in Jacq. Voy. IV. 60. t. 72 ; Hook. Icon. t. 138).

Hab. Frequent in hedges, village-bushes, along river-banks and in rubbishy places, all over Ava, Chittagong, Arracan, and Pegu.—Fl. Sept., Aug.

Cucurbita, L.

Conspectus of Species.

× Calyx-lobes subulate.

Leaves not deeply lobed; petiole scarcely prickly, ... *C. maxima.*

Leaves deeply lobed; petiole prickly, ... *C. Pepo.*

× × Calyx-lobes leafy.

Leaves more or less lobed; petiole scarcely prickly, ... *C. moschata.*

*1. C. moschata, Duch. Dict. d. sc. nat. XI. 234; DC. Prod. III. 317; Naud. in Ann. d. sc. nat. 4 ser. VI. 47. (*C. maxima*, WA. Prod. I. 351; Wight Icon. t. 507, non Duch.; Rheed. Hort. Malab. VIII. t. 2).

Hab. Cultivated in Chittagong, Pegu, and probably elsewhere.—Fl. Fr. April, May.

Bryonia, L.

1. B. laciniosa, L. Mant. 498; Roxb. Fl. Ind. III. 728; DC. Prod. III. 308; WA. Prod. I. 345; Wight Icon. t. 500; Planch. Fl. d. serr. 2 ser. II. 39. t. 1202; Naud. in Ann. d. sc. nat. 4 ser. XII. 139.

Hab. Not uncommon in hedges and in rubbishy places near villages of Prome and Chittagong.—Fl. Octob.; Fr. March.

Muckia, Arn.

1. M. Maderaspatana, Kurz in Journ. As. Soc. Beng. 1871, 58. (*Cucumis maderaspatanus*, L. sp. pl. 1438, non Roxb.; *M. scabrella*, Arn. in Hook. Journ. Bot. III. 276; Wight Ill. II. t. 105*; Walp. Rep. II. 199; Naud. in Ann. d. sc. nat. 4 ser. XII. 142; *Bryonia scabrella*, L. f. Suppl. 424; Roxb. Fl. Ind. III. 724; Wight Icon. t. 501).

Var. *α.* scabrella, leaves broadly triangular to ovate in outline, deeply sinuate-cordate at the base, 3—5-lobed or -angular, the lobes acute or blunt; berries often 4—6 lin. thick.

Var. *β.* gracilis, (*Bryonia gracilis*, Wall. Cat. 6714), leaves not lobed nor angular, ovate-lanceolate, acuminate, almost hastate-cordate at the base; berries usually only 3—4 lin. thick.

Hab. Both varieties frequent in hedges, bushes, &c., in deserted toungyas, along river-banks, &c., all over Burma; var. *β.* more especially in the savannahs of the plains.—Fl. Fr. CS.

Zehneria, Endl.

Conspectus of Species.

Subg. 1. *Karivia*, Arn. Berry large, nearly 2 in. long; seeds numerous, almost globular.

Leaves polymorphic, almost chartaceous, glabrous, ... *Z. umbellata.*
Subg. 2. *Zehneria*, Endl. Berry small, globóse. Seeds few, compressed-oblong.
Leaves herbaceous, flaccid, cordate, repand-toothed, ... *Z. Hookeriana.*

1. Z. UMBELLATA, Thw. in Ceyl. Pl. 125. (*Bryonia umbellata*, Klein in Willd. sp. pl. III. 618; WA. Prod. I. 345; *Momordica umbellata*, Roxb. Fl. Ind. III. 710; *Karivia umbellata*, Arn. in Hook. Journ. Bot. III. 275; Miq. Fl. Ind. Bat. I/1. 661).

HAB. Common, not only in cultivated lands, in bushes, hedges, &c., in and around villages, but still more so in the mixed forests and savannahs, all over Burma, up to 3000 ft. elevation.—Fl. H. and RS.; Fr. CS.

2. Z. HOOKERIANA, WA. in Hook. Journ. Bot. III. (*Bryonia Hookeriana*, WA. Prod. I. 345; Wight Ill. t. 105).

HAB. Ava, Khakyen hills.—Fr. May.

Melothria, L.

1. M. INDICA, Lour. Fl. Coch. I. 43; DC. Prod. III. 313; Naud. in Ann. d. sc. nat. 4 ser. XVI. 169. t. 2. (*Bryonia tenella*, Roxb. Fl. Ind. III. 725; *Aechmandra Indica*, Arn. in Hook. Journ. of Bot. III. 274; *Cucumis murinus viridis*, Rumph. Herb. Amb. V. t. 171. f. 2 ?).

HAB. In hedges near Chittagong.—Fl. Fr. Octob.

Rhynchocarpa, Schrad.

Conspectus of Species.

All parts more or less pubescent; leaves cordate with rounded basal lobes; berry striate, hairy, ... *R. rostrata.*
Leaves deltoid with spreading acute basal lobes, rough above; berries smooth and glabrous, ... *R. deltoidea.*

1. R. ROSTRATA, (*Bryonia rostrata*, Rottl. Nov. Act. Berol. IV. 212; DC. Prod. III. 304; WA. Prod. I. 346; *Bryonia pilosa*, Roxb. Fl. Ind. III. 726).

HAB. Ava, Irawaddi valley near Pagha myo (Wall. Cat. 6713).—Fl. Sept.

2. R. ? DELTOIDEA, Kurz MS.

HAB. Upper Tenasserim, in Attaran (Dr. Brandis); Pegu and Prome Irrawaddi valley.—Fl. Fr. Sept., Octob.

Gomphogyne, Griff.

Conspectus of Species.

Capsule club-shaped, rather narrow; seeds usually 4, about a line long, rounded, obscurely tubercled-wrinkled, ... *G. heterosperma.*
Capsule broadly turbinate: seeds usually 2, about 3 lin. long, oblong-4-angular, rough with tubercled margins, ... *G. cissoides.*

1. G. HETEROSPERMA, Kurz in Journ. As. Soc. Beng. 1871. 58. (*Zanonia heterosperma*, Wall. Cat.; Miq. Fl. Ind. Bat. I/1. 683; *Alsomitra heterosperma*, Rœm. Syn. Monog. II. 118).

Hab. Ava, on Taong dong (Wall.).—Fr. Nov.

A simple-leaved species of *Actinostemma*, or more probably *Gomphostemma*, is not unfrequent along choungs in the tropical forests of the eastern slopes of the Pegu Yomah, especially at the head-waters of the Swa-choung, but I did not succeed in finding either flower or fruit of it.

Alsomitra, Roem.

1. A. sarcophylla, Bth. and Hf. Gen. Plant. I. 840; Bot. Mag. t. 6017. (*Zanonia sarcophylla*, Wall. Pl. As. rar. II. 28. t. 133).

Hab. Not unfrequent in waste places, light jungle, on limestone rocks, &c., of Ava from Mandalay as far south as Prome.—Fl. Sept.; Fr. Octob.

BEGONIACEÆ.

Begonia, L.

Conspectus of Species.

Subg. 1. *Casparea*, DC. Capsule fleshy and berry-like, dehiscing on the angles or broad thick wings.

A robust rather glabrous branched herb; styles 4; berry 4-celled and 4-cornered, the angles produced into as many horn-like appendages, ... *B. Roxburghii.*

Subg. 2. *Begonia*, DC. Capsules dry, dehiscing in a semi-circular line along their sides near the wings or angles.

* *Styles* 2, *each branch* 2-*cleft or variously dilated or branched; capsule* 2-*celled. Placentas* 2-*parted, i. e. consisting of* 2 *longitudinal ovule- or seed-bearing blades.*

× Stamens free. Capsule unequally 3-winged, the 2 lateral wings often reduced to a membranous rib.

A robust branched herb, softly paleaceous-pilose; leaves long-petioled, lobed, .. *B. laciniata.*

As preceding but more slender and quite glabrous,..... *B. megaptera.*

Robust rather simple herb, softly palaceous-pilose; leaves long-petioled, not lobed; petals pale rose-coloured, only about $\frac{1}{3}$ in. long; capsules stuppose-hirsute, the lower wing broad and rounded, $\frac{2}{3}$ in. long,..... *B. nemophila.*

As preceding but more glabrous; flowers larger; capsules glaucous-green, glabrous, .. *B. barbata.*

× × Stamens monadelphous.

\+ Male perianth 5-lobed, the female one 5—6-lobed. Capsule unequally 3-winged.

† Inflorescence axillary or arising from the base of the leaf, or prolific from an axillary bud.

‡ Not prolific. Leaves alternate or whorled, rarely reduced to a single one. Flowers small, white.

O Glabrous.

Leaves alternate, the petioles 1—2 lin. long, ... *B. procridifolia.*

Leaves whorled, longer petioled,..... *B. verticillata.*

O O Stems and petioles pubescent.

Inflorescence glabrous; leaves alternate, long-petioled, sparingly and minutely hirsute above, ... *B. Martabanica.*

‡ ‡ Prolific, with a solitary radical or a few alternate leaves. Flowers small, white.

More or less stellate-velvety; inflorescence glabrous; leaves alternate or rarely solitary, ..*B. sinuata.*

Glabrous; leaf solitary, from the base of which 2 or more flowering peduncles arise, ..*B. prolifera.*

Stems etc. and the conspicuously bracted inflorescence paleaceous-pilose, the indumentum often intermixed with soft gland-hairs, ... *B. paleacea.*

† † Leaves and inflorescence radical.

Leaves contracted into a petiole 2—3 lin. long, ciliate, hispid above; flowers nearly an in. in diameter, white, ... *B. nivea.*

+ + Perianth of both sexes 2-sepalled, apetalous.

Very tender herb; leaves alternate, minutely and sparingly pilose above; flowers small, ... *B. flaccidissima.*

* * *Styles* 3, *free or connate. Capsule* 3-*celled and* 3-*winged.*

× Placentas entire and simple.

Glabrous, the inflorescence radical or nearly so; leaves radical, deeply lobed; perianth 2-sepalled, apetalous, ... *B. Brandisiana.*

× × Placentas 2-cleft.

\+ Caulescent herbs, with alternate cauline leaves.

All parts (also the inflorescence) glabrous; capsule 3 lin. long, the wings truncate at the apex; stamens monadelphous, ... *B. parvuliflora.*

Leaves sparingly and minutely bristly and glossy above, in other respects very similar to the preceding; capsule ½ in. long; stamens free, the anthers mucronulate; styles free, ... *B. modestiflora.*

Like preceding, but leaves opaque and more pilose; stamens monadelphous, the anthers terminated by the broad truncate connective; styles united up to the middle, ..*B. scutata.*

Leaves minutely and sparingly pilose; inflorescence glandular-puberulous; stamens monadelphous; capsule-wings half-sagittate, produced into blunt basal lobes, ..*B. surculigera.*

\+ + Scapigerous herbs, the leaves and inflorescences radical and usually solitary.

Leaves very long-petioled, peltate at the base, papillose-dotted and glabrous, ..*B. subperfoliata.*

Leaves very long-petioled, cordate (not peltate), papillose and minutely pilose above; stamens free, ... *B. velutina.*

1. B. Roxburghii, DC. Prod. XV/1. 398 (*Casparya oligocarpa*, DC. l. c. 276; *B. Malabarica*, Roxb. Fl. Ind. III. 648; Casparea polycarpa, DC. Prod. l. c. 277).

Hab. Chittagong.

2. B. laciniata, Roxb. Fl. Ind. III. 649; Bot. Mag. t. 5021; DC. Prod. XV/1. 347.

Hab. Along rivulets of the damp hill-forests of the Martaban hills east of Tounghoo, at 6—7000 ft. elevation. Fr. March.

3. B. MEGAPTERA, A. DC. in Ann. d. sc. nat. 4 ser. XI. 134 ; and Prod. XV/1. 348.

HAB. Martaban hills (Nattoung) east of Tounghoo (Revd. Mason).

4. B. NEMOPHILA, Kurz MS.

HAB. Not unfrequent in the damp hill-forests, especially along rocky streamlets, of the Martaban hills east of Tounghoo, at 3000 to 4000 ft. elevation.—Fl. Fr. March.

5. B. PROCRIDIFOLIA, Wall. Cat. 6292 ; DC. Prod. XV/1. 352.

HAB. Tenasserim, Tavoy (Wall.).—Fl. Fr. Aug.

6. B. VERTICILLATA, Hook. Icon. Pl. t. 811 ; DC. Prod. XV/1. 353.

HAB. Tenasserim, Moulmein hills (Lobb, Parish).

7. B. MARTABANICA, A. DC. in Ann. d. sc. nat. 4 ser. XI. 136 and Prod. XV/1. 354.

HAB. Tenasserim (Lobb, Helfer).

8. B. SINUATA, Wall. Cat. 3680 ; Meisn. in Linn. 1838. Litt. 15. de prolif. ; DC. Prod. XV/1. 354. (*Diploclinium biloculare*, Wight Icon. t. 1840 ; *B. Andamanensis*, Parish MS. in Kurz And. Rep. p. 15).

HAB. Tenasserim frequent from Moulmein down to Mergui ; also on the Andamans.—Fl. Fr. June, July.

9. B. PROLIFERA, A. DC. in Ann. d. sc. nat. 4 ser. XI. 135 and Prod. XV/1. 353.

HAB. Tenasserim, Moulmein (Parish, Lobb).

10. B. PALEACEA, Kurz in Journ. As. Soc. Beng. 1871. 60.

HAB. Upper Tenasserim, by the sides of hill-streams.—Fl. Fr. June—Aug.

11. B. NIVEA, Parish in Journ. As. Soc. Beng. 1873. 81.

HAB. Tenasserim, Moulmein (Parish).

12. B. FLACCIDISSIMA, Kurz in Journ. As. Soc. Beng. 1872. 308.

HAB. Martaban, on Zwakabin, a lime-stone hill north of Moulmein. (Parish).—Fl. Octob.

13. B. BRANDISIANA, Kurz in Journ. As. Soc. Beng. 1871. 58.

HAB. Tenasserim, Attaran (Dr. Brandis).

14. B. PARVULIFLORA, A. DC. Ann. d. sc. nat. 4 ser. XI. 136 and Prod. XV/1. 355.

HAB. Upper Tenasserim (Lobb).

15. B. MODESTIFLORA, Kurz in Jonrn. As. Soc. Beng. 1871. 59.

HAB. On sandstone-rocks in the bed of hill-streams on Baronga island opposite Akyab, Arracan, up to 1000 ft. elevation.—Fl. Sept., Oct.

16. B. SCUTATA, Wall. Cat. 3686 ; DC. Prod. XV/1. 328. (*B. dioica*, Don. Prod. Nep. 223 ?).

HAB. Ava, near Bhamo, and most probably elsewhere.—Fl. Fr. Sept.

17. B. SURCULIGERA, Kurz in Journ. As. Soc. Beng. 1871. 59.

Hab. Arracan, frequent on moist mossy sandstone-rocks in the tropical forests of the Akyab district.—Fl. Fr. Octob.

18. B. subperfoliata, Parish in Journ. As. Soc. Beng. 1873. 81.

Hab. Tenasserim, Moulmein District. (Revd. Parish).

19. B. velutina, Parish in Journ. As. Soc. Beng. 1873. 81.

Hab. Tenasserim, Moulmein District (Parish, Stoliczka).

Habit of *B. subpeltata*, Wight, but differs in the 2-lamellate placentas.

DATISCACEÆ.

Tetrameles, R. Br.

1. T. nudiflora, R. Br. in Horsf. Pl. Jav. rar. 79. t. 17; DC. Prod. XV/1. 411; Bedd. Fl. Sylv. t. 212. (*T. Grahamiana*, Wight Icon. t. 1956).

Var. *α.* genuina, leaves more or less pubescent beneath.

Var. *β.* glabra, leaves glabrous.

Hab. Frequent in the tropical forests and along choungs in the upper mixed forests, all over Pegu and Martaban down to Tenasserim and the Andamans; var. *β.* on the Andamans.—Fl. HS. Fr. Begin of RS.

The open ovary, the parietal placentation, and the habit generally (especially of *Datisca*) point to *Resedaceæ*.

CACTEÆ.

Opuntia, Mill.

*1. O. Dillenii, Haw. in DC. Prod. III. 472; WA. Prod. I. 363; Wight Ill. II. t. 114. (*Cactus Dillenii*, Bot. Reg. t. 255; *Cactus Indicus*, Roxb. Fl. Ind. II. 475).

Hab. Cultivated in the drier districts of Burma, as in Prome.

FICOIDEÆ.

Conspectus of Species.

Trib. I. AIZOIDEÆ. Calyx free but with a distinct turbinate tube bearing the stamens at or below the summit. Fruit a capsule. (*Capsule circumsciss. Leaves opposite.*)

Sesuvium. Stamens 5 to many. Ovary 3—5-celled, with axillary many-ovuled placentas.

Trianthema. Stamens 5 or 10, or many. Ovary 1—2-celled, with basilar 1-more-ovuled placentas.

Trib. II. MOLLUGINEÆ. Calyx free, divided to the base or nearly so. Petals 3—5, or none. Stamens hypogynous or almost perigynous. Fruit a capsule or divided into 2—3 cocci.

* *Fruit a capsule. Leaves usually with stipules.*

Mollugo. Petals 3—5, or none. Ovary 3—5-celled, with many ovules in each cell. Leaves usually spuriously whorled.

* * *Fruit 2—3-coccous, the cocci 1-seeded. Leaves without stipules.*

Gisekia. Petals none. Carpels 3—5, free. Utricules 5—3. Leaves opposite or spuriously whorled.

Sesuvium, L.

1. S. Portulacastrum, L. sp. pl. 446 ; DC. Prod. III. 453 ; Roxb. Fl. Ind. II. 509.

Hab. Not unfrequent on mud banks of tidal channels and in the tidal jungles of lower Pegu and Tenasserim ; also on the Andamans.—Fl. May—June.

Trianthema, L.

Conspectus of Species.

* *Ovary and capsule* 2-*celled ; styles* 2.

Flowers clustered ; stamens 10 or 11 ; ovary 4-ovuled, ... *T. decandra.*

Flowers clustered ; stamens 5 ; ovary 4-ovuled, ... *T. pentandra.*

* * *Ovary and capsule* 1-*celled ; style* 1.

Leaves obovate, rather large, glabrous or slightly pubescent ; flowers solitary ; ovary many-ovuled ; stamens about 15 ; style long, ... *T. obcordata.*

Leaves linear, small, covered with crystalline dots ; stamens 5 ; style short, simple, .. *T. crystallina.*

1. T. decandra, L. Mant. 70 ; Roxb. Fl. Ind. II. 444 ; WA. Prod. I. 355 ; Wight Icon. t. 296.

Hab. Ava, on the banks of the Irrawaddi.—Fl. Fr. Jan.

2. T. obcordata, Roxb. Fl. Ind. II. 445 ; WA. Prod. I. 355 ; Wight Icon. t. 288.

Hab. Arracan, in rubbishy places near Akyab.

Requires comparison with *Trianthema monogyna*, L.

3. T. crystallina, Vhl. Symb. I. 32 ; Roxb. Fl. Ind. II. 444 ; WA. Prod. I. 355 ; Edg. in Linn. Journ. VI. 203.

Hab. Ava, on sand-banks of the Irrawaddi, as near Yenangchoung (Wall.).—Fl. Sept.

Mollugo, L.

Conspectus of Species.

Subg. 1. *Glinus*, L. Seed with a strophiole dilated into a small arillus.

Softly pubescent or tomentose ; flowers rather large, in axillary clusters ; stamens about 10—15, ... *M. Glinus.*

Glabrous or slightly pubescent ; flowers rather small, on long slender pedicels, forming axillary clusters ; stamens fewer than 10, ... *M. Spergula.*

Subg. 2. *Mollugo*, L. Seeds without a strophiole.

Glabrous, the stems angular ; flowers minute, on capillary pedicels, forming cymes, .. *M. stricta.*

1. M. Glinus, A. Rich. Fl. Abyss. I. 48. (*Glinus lotoides*, L. sp pl. 663 ; DC. Prod. III. 455 ; WA. Prod. I. 362 ; Fenzl Monogr. Mollug. 357 ;

Sibth. Fl. Græc. t. 472 ; *Tryphera prostrata*, Bl. Bydr. 549 ; DC. Prod. XIII/2. 424).

Var. *α.* LOTOIDES, (*Glinus lotoides*, L. l. c. ; *M. Glinus α. candida*, Fenzl. Monogr. Monog. Mollug. 358), branches often white-tomentose ; flowers sessile or nearly so.

Var. *β.* DICTAMNOIDES, (*Glinus dictamnoides*, L. Mant. 243 ; DC. Prod. III. 455 ; WA. Prod. I. 362 ; *Pharnaceum pentagynum*, Roxb. Fl. Ind. II. 103), leaves pubescent but greenish ; flowers usually pedicelled.

HAB. Var. *α.* common in fallow-fields, along river-banks, in rubbishy places, etc. all over Pegu, especially in the cultivated plains ; also Ava.—Fl. May, June.

2. M. SPERGULA, L. sp. pl. 131 ; DC. Prod. I. 391 ; WA. Prod. I. 44. (*M. stricta*, Roxb. Fl. Ind. I. 360 ; *M. parviflora*, Ser. ap. DC. Prod. I. 391 ; *Glinus Mollugo*, Fenzl Monog. *Mollug.* 359 ; *Alsine erecta* Burm. Zeyl. 13. t. 7 ; *Pharnaceum Mollugo*, L., Roxb. Fl. Ind. II. 102).

HAB. Frequent in fallow-fields, along road-sides and river-banks, in rubbishy places, etc. all over Burma, especially the cultivated plains, ascending up to 4500 ft. elevation into the hill-toungyas of Martaban.—Fl. HS.

3. M. STRICTA, L. sp. pl. 131 ; DC. Prod. I. 391 ; Fenzl Monogr. Mollug. 380 ; Walp. Rep. II. 241 ; WA. Prod. I. 44.

Var. *α.* STRICTA (*M. stricta*, L. l. c.), leaves rather thin and green, linear-lanceolate, usually acuminate at both ends.

Var. *β.* PENTAPHYLLA, Bth. Fl. Hongk. 23. (*M. pentaphylla*, L. sp. pl. 131 ; DC. Prod. I. 391 ; Roxb. Fl. Ind. I. 359 ; WA. Prod. I. 44 ; Fenzl Monogr. Mollug. 381 ; *M. triphylla*, Lour. Fl. Cochinch. 79 ; DC. Prod. I. 392 ; Roxb. Fl. Ind. I. 360 ; WA. Prod. I. 44).

HAB. Var. *β.* not uncommon in toungyas and native gardens of Martaban and Pegu, and most probably elsewhere.—Fr. May.

Gisekia, L.

1. G. PHARNACEOIDES, L. Mant. 2. app. 562 ; Roxb. Corom. Pl. II. t. 183 ; DC. Prod. XIII/2. 27 ; Wight Icon. t. 1167.

HAB. Ava, near Yenang choung, road to the Petroleum-wells. (Wall.).

UMBELLIFERÆ.

Conspectus of Species.

* *Umbels simple or irregularly (very rarely regularly) compound. No vittæ in the furrows of the mericarp.*

Trib. 1. *HYDROCOTYLEÆ.* Fruits laterally compressed, the mericarps rounded or acute on the back (not sharply angular).

HYDROCOTYLE. Fruits much compressed. Calyx-teeth minute or obsolete. Petals concave, valvate or imbricate. Umbels simple. Creeping herbs with simple leaves.

Trib. 2. *SANICULEÆ.* Mericarps almost terete or laterally compressed, the commissure broad. Calyx-teeth or lobes usually conspicuous.

Sanicula. Mericarps echinate from bristles which are often hooked. Flowers pedicelled, polygamous. Bracts small. Umbels very small, usually panicled. Leaves dissected, toothed.

* * *Umbels regularly compound.*

× Primary ribs of the mericarp more or less conspicuous, secondary ones none. Vittæ in the furrows usually conspicuous or obscure, very rarely none.

Trib. 3. *AMMINEÆ.* Fruits laterally compressed, or narrowed or sulcate on both sides of the commissure.

* *Seeds with a convex or almost flat face.*

× Leaves simple. Flowers yellow.

Bupleurum. Umbels compound or rarely the flowers in heads. Calyx-teeth obsolete. Disk-lobes almost flat. Leaves entire, flat.

× × Leaves variously compound. Flowers usually white, rarely yellow.

Apium. Carpophore simple or 2-cleft at the apex. Fruit didymous or ovate, the mericarps almost straight. Petals entire, blunt or acute.

Carum. Carpophore 2-cleft or 2-parted. Fruit ovate or oblong, the ribs rather prominent. Involucre-bracts few and small, or none. Petals notched or 2-lobed. Calyx-teeth obsolete or slightly prominent. Disk-lobes conical, or the disk convex.

Pimpinella. Carpophore 2-cleft or 2-parted. Ribs of the mericarps narrow, the vittæ numerous, conspicuous or very thin. Involucre-bracts few and small, or none, very rarely numerous. Petals white or yellow. Disk-lobes thick, cushion-like or conical. Calyx-teeth obsolete or very rarely small.

Trib. 4. *SESELINEÆ.* Fruits transversely terete or compressed from the back, the commissure broad, the lateral ribs either distinct, or united to the nerve-like or corky-thickened margin which is not dilated.

* *Fruit transversely sub-terete or more or less compressed from the back, the primary ribs not winged.*

× Primary ribs of the mericarps almost equal, not winged.

Fœniculum. Fruits not beaked, the primary ribs thin or thick but not corky, the secondary ones wanting. Calyx-teeth obsolete. Petals entire, yellow.

× × Lateral ribs of the mericarps not winged, confluent with the thick, often corky margin, entire after the dehiscence. Vittæ solitary in the furrows.

Oenanthe. Petals notched or 2-lobed. Carpophore absent. All ribs of the mericarps very blunt and almost corky. Leaves usually pinnate or dissected. Umbels compound.

* * *Fruits compressed from the back or almost terete, all the primary ribs, or only the keeled ones, more or less expanded into thick wings, the wings equal, or the lateral ones broader.*

Selinum. Fruits ovate, somewhat compressed from the back, the ribs equally winged or the lateral ones broader. Disk-lobes conical or depressed. Flowers white or yellowish green.

Trib. 5. *PEUCEDANEÆ.* Fruit much compressed from the back, the lateral ribs dilated into wing-like or broadly swollen margins, remaining entire after the dehiscence.

Peucedanum. Mericarps more or less convex on the middle, (rarely nearly flat) the margins rather thick and sharp, or broadly winged, vittæ solitary in the furrows

and conspicuous, or rarely by 2—3 and obsolete, reaching the base of the fruit or sometimes shorter.

Heracleum. Petals often radiate. Mericarps flat-compressed or hardly convex at the middle, the margins wing-like; vittæ solitary or rarely by twos in the furrows, often clavate, reaching the base of the fruit or more usually shorter.

× × Secondary ribs of the mericarps filiform, somewhat prominent or winged, rarely all the ribs more or less inconspicuous; vittæ in the furrows or below the secondary ribs conspicuous or obsolete.

Trib. 6. *CAUCALINEÆ.* Fruit almost terete or slightly compressed from the sides, or more so from the back, not winged, or rarely the primary ribs expanded into deeply lobed wings or divided into spines.

* *Mericarps glabrous, the ribs blunt, smooth or wrinkled.*

Coriandrum. Fruits almost globose, the broad very blunt secondary ribs hardly prominent. Involucre none.

* * *Mericarps hirsute, bristly or aculeate.*

Daucus. Seed with rather flat face. Involucre-bracts usually dissected.

Caucalis. Seed deeply sulcate or involute on the face. Involucre-bracts linear or none.

Hydrocotyle, L.

Conspectus of Species.

* *Leaves entire or crenate. Umbels bracted.*

Flowers by 3—4 in the head, sessile; fruits nearly 2 lin. in diameter, each mericarp with 2 hardly prominent ribs, ... *H. Asiatica.*

* * *Leaves more or less lobed, the lobes acute or blunt, crenate or serrate. Umbels without bracts.*

× Peduncles and petioles more or less puberulous.

Flowers numerous, almost sessile or very shortly pedicelled, forming rather crowded terminal head-like umbels, the lower ones solitary and axillary, ... *H. Javanica.*

× × All parts quite glabrous.

Flowers on slender pedicels, forming slender solitary umbels in the axils of the leaves, .. *H. Birmanica.*

1. H. Asiatica, L. sp. pl. 234; DC. Prod. IV. 62; Roxb. Fl. Ind. II. 682; Wight Icon. t. 565. (*H. cordifolia*, Hf. in Hook. Icon. pl. t. 303).

Hab. Rather frequent in grass-land, especially along river-sides, in cultivated lands chiefly, all over Pegu and Martaban, up to 2500 ft. elevation, and no doubt all over the country; Andamans introduced, and now much spread.—Fr. Febr.

2. H. Javanica, Thunb. Diss. II. 415. t. 3; Miq. Fl. Ind. Bat. I. 734. (*H. Nepalensis*, Hook. Exot. Bot. I. t. 30; *H. polycephala*, WA. Prod. I. 366; Wight Icon. t. 1003).

Hab. In the betelnut-plantations of the Martaban hills east of Tounghoo, up to 3000—4000 ft. elevation.

3. H. Birmanica, Kurz in Journ. As. Soc. Beng. 1871. 60.

Hab. Upper Tenasserim, Daunat toung, 3000 ft. (Dr. Brandis); Thounggyeen, at 5000 ft. elevation (Revd. Parish).

Sanicula, L.

1. S. Europæa, L. sp. pl. 339; DC. Prod. IV. 84; Fl. Dan. II. t, 283; Engl. Bot. II. t. 98. Rchb. Flor. Germ. XXI. t. 1847. (*S. montana*, Reinw. in Bl. Bydr. 832; DC. Prod. IV. 85; Miq. Fl. Ind. Bat. I/1. 736; *S. Javanica*, Bl. Bydr. 852; DC. Prod. IV. 85; *S. elata*, Ham. in Don. Prod. Nep. 183, Wight Icon. t. 1004 and 334 and Spicil. Nilgh. t. 79 and Illustr. t. 117; DC. Prod. IV. 85).

Hab. Ava, Khakyen hills (J. Anderson).—Fl. April.

Bupleurum, L.

1. B. tenue, Don. Prod. Nep. 182; DC. Prod. IV. 128.

Hab. Along grassy outskirts of the drier hill-forests of the Martaban hills east of Tounghoo, as on Nattoung at about 7000 ft. elevation.—Fr. Febr.

Apium, L.

*1. A. graveolens, L. sp. pl. 379; DC. Prod. IV. 101; Engl. Bot. t. 1210.

Hab. Only cultivated in gardens of the drier districts chiefly, as Prome and Ava.—Fl. HS.

Carum, L.

Conspectus of Species.

* *Fruits glabrous.*

Flowers yellowish or greenish yellow, ... *C. Petroselinum.*
Flowers white; calyx-teeth obsolete; fruits oblong, ... *C. Carvi.*

* * *Fruits hirsute or puberulous.* Flowers white.

Leaves ternati-sect, lobes of the segments oblong-linear, ... *C. Roxburghianum.*
Leaves pinnately decompound, the lobes of the segments setaceous, ... *C. Copticum.*

*1. C. Petroselinum, Bth. and Hf. Gen. Plant. I. 891. (*Petroselinum sativum*, Hoffm. Umb. I. 78; DC. Prod. IV. 102; Hayne Arzney Gew. 7. t. 23).

Hab. Only cultivated in gardens of Europeans, chiefly in the drier districts.

2. C. Roxburghianum, Bth. and Hf. Gen. Plant. I. 891. (*Apium involucratum*, Roxb. Fl. Ind. II. 97; *Pimpinella involucrata*, WA.; Wight Icon. t. 567).

Var. α. genuina, all parts minutely puberulous; fruits greyish hirsute.

Var. β. glabriuscula, all parts less puberulous or almost glabrous; fruits slightly puberulous.

Hab. Much cultivated all over the country up to 2000 ft. elevation, and not unfrequently springing up in recently deserted toungyas; var. β. near Prome (Wall.); central parts of the Pegu Yomah, Zamayee (Dr. Brandis).—Fl. Fr. CS.

N. B. *Carum Carvi*, L., and *C. Copticum*, Bth. and Hf. (*Ptychotis Ajowan*, DC.), are numerated by Rev. Mason in his list of Burmese plants as introduced.

Pimpinella, L.

Slender almost glabrous annual; peduncles filiform; umbels without bracts, .. *P. Heyneana.*

Robust pubescent herb; peduncles stout; involucral bracts linear, $\frac{1}{2}$—$\frac{1}{3}$ as long as the peduncles, .. *P. Parishiana.*

1. P. Heyneana, Bth. and Hf. Gen. Plant. I. 894. (*Helosciadium? Heyneanum*, DC. Prod. IV. 106; *Anethum trifoliatum*, Roxb. Fl. Ind. II. 96).

Hab. Locally but socially in the upper mixed forests of the Pegu Yomah.—Fr. Nov., Dec.

2. P. Parishiana, Kurz in Journ. As. Soc. Beng. 1872. 309.

Hab. Martaban, on the Zwakabin (Rev. Parish, No. 315).

Habit of *P. diversifolia.*

Fœniculum, Ad.

*1. F. vulgare, Gærtn. Fruct. I. 105; DC. Prod. IV. 142; Wight Icon. t. 515. (*Anethum Fœniculum*, L. sp. pl. 722; Engl. Bot. t. 1208).

Hab. Cultivated in native gardens and fields, especially in the Prome District.

Œnanthe, L.

Conspectus of Species.

Leaves pinnately decompound; umbels on short leaf-opposed peduncles or almost sessile, ... *Œ. Benghalense.*

Leaves pinnate (rarely bipinnate); umbels on very long peduncles, ... *Œ. stolonifera.*

1. Oe. stolonifera, DC. Prod. IV. 138; Wight Icon. t. 571. (*Phellandrium stoloniferum*, Roxb. Fl. Ind. II. 93).

Hab. In swamps and in and around stagnant waters of the alluvial plains of Pegu, here and there, as in the ditches round the fort of Tounghoo; about Rangoon, &c.—Fl. May.

Selinum, L.

1. S. sp.?

A species apparently of this genus is not unfrequent on the hill-pastures of the Martaban hills east of Tounghoo, above 6000 ft. elevation, but the plants (like those of 2 or 3 other umbelliferous plants which grew in company with it) were too much dried up to permit of identification.

Peucedanum, L.

Conspectus of Species.

Glabrous, glaucous; leaves pinnately decompound, the lobes filiform, ... *P. Sowa.*

Leaves pinnate, the leaflets puberulous beneath, broadly oblong, serrate, often lobed, .. *P. Pastinaca.*

*1. P. Sowa, Bth. and Hf. Gen. Plant. (*Anethum Sowa*, Roxb. Fl. Ind. II. 96; Wight Icon. t. 572).

Hab. Much cultivated in the plains as well as in the hills up to 2000 ft. elevation, and often springing up in recently deserted toungyas.—Fl. Fr. CS.

*2. P. Pastinaca, Bth. and Hf. Gen. Plant. (*Pastinaca sativa*, L. sp. pl. 376; DC. Prod. IV. 188).

Hab. Only cultivated, especially in gardens of Europeans.

Heracleum, L.

1. H. Birmanicum, Kurz in Journ. As. Soc. Beng. 1872. 309.

Hab. Frequent in the upper dry forests of the highest crests of the Pegu Yomah, on and around the Kambala-toung, at 2500 to 3000 ft. elevation.—Fl. Febr.

This plant forms a very conspicuous feature on the ridges referred to, but, unfortunately, all the specimens were so perfectly dried-up and withered that it was impossible to give a full description of the species. It is nearest to *Heracleum* No. 5 of Hf. and Th. collection from the Khasi hills and eventually may be referable to it.

Coriandrum, L.

*1. C. sativum, L. sp. pl. 367; DC. Prod. IV. 250; Wight Icon. t. 516.

Hab. Ava, on Taong dong (Wall.) and Bhamo (J. Anderson), most probably only cultivated.—Fl. Fr. Nov. Febr.

Daucus, L.

*1. D. Carota, L. sp. pl. 348; DC. Prod. IV. 211; Roxb. Fl. Ind. II. 90.

Hab. Only cultivated, especially in European kitchen-gardens of the drier districts.

ARALIACEÆ.

Conspectus of Genera.

Trib. 1. *ARALIEÆ.* Petals more or less imbricate, broad at the base.

Aralia. Gynœcium 2—5-merous. Styles free. Fruit angular in a dried state. Pedicels jointed. Leaves usually pinnate or decompound.

Trib. 2. *HEDEREÆ.* Petals valvate in bud.

* *Stamens as many as petals.*

× Albumen homogeneous. (*Panaceæ.*)

\+ Ovary 2- (rarely 1-, 3-, or 4-) celled, the cells usually fewer in number than the petals.

† Styles distinct from the base or from a conical base.

Panax. Fruits laterally compressed or didymous, rarely 3—4-angular. Filaments filiform. Styles distinct, at length recurved, the stigmas more or less decurrent on the

inner side. Umbels, heads, or racemes forming compound inflorescences, rarely simple. Leaves various.

† † Styles united into a cone or column.

Brassaiopsis. Flowers 5-merous. Fruits terete. Ovary 2—1-celled. Pedicels not jointed. Umbels forming large terminal racemes. Leaves palmatifid, rarely digitate.

\+ + Ovary 5- or more- (rarely by abortion 3—4-) celled.

Heptapleurum. Flowers 5—6- (rarely 4- or 7—8-) merous. Drupes angled and ribbed in a dried state. Umbels, heads, or racemes forming large compound inflorescences. Pedicels not jointed.

Trevesia. Flowers 8—12-merous. Drupes globular, sulcate or ribbed. Umbels panicled. Leaves palmatifid, digitate, or pinnate. Pedicels not jointed.

× × Albumen ruminate. (*Hedereæ*).

\+ Ovary 1-celled.

Arthrophyllum. Pedicels not jointed. Umbels compound. Leaves pinnate or simple.

\+ + Ovary 2- or rarely 3-celled.

† Pedicels not jointed with the calyx.

Heteropanax. Styles distinct, filiform. Umbels racemose, in panicles. Leaves pinnately decompound.

† † Pedicels jointed under the calyx.

Macropanax. Styles united into a cone or column. Umbels or heads forming panicles. Leaves digitate.

* * *Stamens numerous, and more numerous than the petals. Styles none or connate. Petals valvate or firmly cohering.* (Pleurandræ).

Tupidanthus. Petals firmly cohering into a thick mitre. Gynœcium poly- (up to 100-) merous. Leaves digitate.

Aralia, L.

1. A. armata, Seem. Journ. Bot. VI. 134. (*Panax armatum*, Wall. ap. G. Don. Gen. Syst. III. 386; Walp. Rep. II. 429).

Hab. Tenasserim, near Tavoy (Wall. Cat. 4933).—Fl. Aug.

Panax, L.

Conspectus of Species.

Leaves decompoundly 3-pinnate, the segments spiny-serrate, ... *P. fruticosum.*
Leaves 1-foliolate, ... *P. cochleatum.*

*1. P. fruticosum, L. sp. pl. 1515; Roxb. Fl. Ind. II. 76; Wight Icon. t. 573. (*Nothopanax fruticosum*, Miq. Fl. Ind. Bat. I/1. 765).

Hab. Here and there cultivated in villages of Pegu and elsewhere.

Brassaiopsis, Dcne. and Planch.

1. B. palmata, Kurz in Journ. As. Soc. Beng. 1870. 77. (*Panax palmatum*, Roxb. Fl. Ind. II. 74; *Araliopsis Andamanica*, Kurz in And. Rep. App. B. 9).

Hab. Chittagong (Roxb.); here and there in the tropical forests of the Andamans.—Fr. May, June.

Heptapleurum, Gærtn.

Conspectus of Species.

Subg. 1. *Heptapleurum*, Seem. Stigmas immersed on the ovary, dot-like.
Climber; leaves and inflorescence glabrous, ... *H. venulosum.*
Subg. 2. *Agalma*, Miq. Styles united into an elongate column.
Leaflets on thick rather short petiolules, entire, ... *H. glaucum.*
Leaflets on very long, slender petiolules, usually pinnati-lobed, ... *H. hypoleucum.*

1. H. VENULOSUM, Seem. Journ. Bot. III. 80. (*Paratropia venulosa*, WA. Prod. I. 377; Wight Ill. t. 118; *Aralia digitata*, Roxb. Fl. Ind. II. 107).

HAB. Frequent in the mixed forests all over Burma from Chittagong and Ava down to Tenasserim and the Andamans.—Fl. April, May.

2. H. GLAUCUM, Bth. and Hf. Gen. Plant. (*Agalma glaucum*, Seem. Journ. Bot. II. 299).

HAB. Not unfrequent in the damp hill-forests of the Martaban hills east of Tounghoo, from 6000 ft. elevation upwards.—Fr. March.

3. H. HYPOLEUCUM, Kurz For. Fl. Burm. I. 539.

HAB. Not unfrequent in the drier hill-forests of the Martaban hills east of Tounghoo, at 6000 ft. elevation and higher up; also Ava, Kakhyen-hills (J. Anderson).

Very near allied to the preceding species.

Trevesia, Vis.

1. T. PALMATA, Vis. Mem. Acad. Torin. ser. 2. IV. 262, (*Gastonia palmata*, Roxb. Fl. Ind. II. 407; Bot. Reg. t. 894; *T. Burmanica*, T. Anders. in Proc. Agri. Hort. Soc. Ind. 1867. 20).

HAB. Common in the tropical forests all over Burma from Chittagong and Ava down to Tenasserim, up to 4000 ft. elevation.—Fl. March, April; Fr. June.

The leaves in this species vary very much in cut, the base of the lobes being often abruptly reduced to the midrib only.

Arthrophyllum, Bl.

1. A. JAVANICUM, Bl. Bydr. 879. (*A. ellipticum* Bl. l. c.; *A. Blumeanum*, Zoll. and Mor. Syst. Verz. 41; Miq. Fl. Ind. Bat. I/1. 768).

HAB. In the tropical forests of the western coasts of South Andaman (Port Mouat).—Fl. Febr. March.

Heteropanax, Seem.

1. H. FRAGRANS, Seem. Fl. Vit. 114. in adnot. and Journ. Bot. IV. 297. (*Panax fragrans*, Roxb. Fl. Ind. II. 76).

HAB. Frequent in all leaf-shedding forests, from Chittagong and Ava to Pegu and Martaban, up to 3000 ft. elevation.—Fl. Jan. Febr.; Fr. May, June.

Macropanax, Miq.

1. M. OREOPHILUM, Miq. Fl. Ind. Bat. I/1. 764.

HAB. Not unfrequent in the hill-forests, especially the damper ones, of the Martaban hills east of Bhamo, above 4000 ft. elevation; Ava, Kakhyen hills (J. Anderson).

Tupidanthus, Hf. and Th.

1. T. CALYPTRATUS, Hf. and Th. in Bot. Mag. t. 4908.

HAB. Arracan hills (Theobald).

CORNACEÆ.

Conspectus of Genera.

* *Petals narrow-linear, valvate. Anthers basifix. Style elongate. Leaves alternate.*

ALANGIUM. Stamens usually 2 to 4 times the number of the petals. Ovary 1-celled. Albumen ruminate. Flowers clustered or fascicled.

MARLEA. Stamens as many as petals. Ovary 1—3-celled. Albumen homogeneous. Flowers cymose-panicled.

* * *Petals short, valvate. Anthers dorsifix. Style short.*

CORNUS. Petals 4. Ovary 2-celled, with a simple stigma. Leaves usually opposite.

Alangium, Lamk.

Conspectus of Species.

A tree, spiny-armed; petioles 6—8 lin. long; petals 10—6; filaments densely pilose at the base; bracts and bractlets broadly ovate, very deciduous, ..*A. decapetalum.*

A large climber, unarmed; petioles shorter; petals 6; filaments sparingly pilose at the base; bracts and bractlets linear-oblong, longer persistent, ... *A. Sundanum.*

1. A. DECAPETALUM, Lamk. Encycl. Dict. I. 174; DC. Prod. III. 203; WA. Prod. I. 72; Wight Icon. t. 194; Voigt Cat. Hort. Calc. 40 cum syn. (*A. hexapetalum*, Lamk. l. c.; DC. l. c.; WA. l. c. 326; Wight Ill. II. t. 96; Roxb. Fl. Ind. II. 502; *A. tomentosum*, Lamk. l. c.; DC l. c.; Rheed. Hort. Malab. IV. t. 17.; *A. Lamarckii*, Bedd. Fl. Sylv. t. 215).

HAB. Burmah (according to Rev. Dr. Mason).—Fl. HS.

The above synonymy probably includes two different species. I suspect that Thwaites' *A. Lamarckii* is a climber. The calyx-tube is apparently sulcate-ribbed.

2. A. SUNDANUM, Miq. Fl. Ind. Bat. I/1. 772 and Suppl. Fl. Sumatr. 341.

Var. *α*. MIQUELIANA, flowers on pedicels $\frac{1}{3}$—$\frac{2}{3}$ in. long.

Var. *β*. INSULARUM, pedicels only 2—3 lin. long.

HAB. Var. *β*. In the tropical forests of the Andamans.—Fl. March, April.

Marlea, Roxb.

Conspectus of Species.

Petals about ½ in. long or shorter; anthers with a glabrous connective; leaves glabrous, .. *M. begoniæfolia.*

Petals nearly an inch long; anther-connective pilose and bearded; leaves puberulous beneath, .. *M. tomentosa.*

1. M. BEGONIÆFOLIA, Roxb. Corom. Pl. III. t. 283 and Fl. Ind. II. 261; DC. Prod. IV. 267; Bot. Reg. t. 61; Miq. Fl. Ind. Bat. I/1. 774; Dene. in Jacq. Voy. Bot. t. 83. (*Styrax Javanicum*, Bl. Bydr. 671).

HAB. Tropical forests of Martaban east of Tounghoo; Ava, hills east of Bhamo.—Fl. March.

2. M. TOMENTOSA, Endl. Gener. No. 6097 and Suppl. III; Hassk. in Flora 1844. 605; Miq. Fl. Ind. Bat. I/1 775. (*Diacicarpium rotundifolium*, Hassk. in Bonpl. VII. 172).

HAB. Not unfrequent in the tropical forests of Martaban; Tenasserim, Thounggyeen.—Fl. March, April.

Cornus, L.

1. C. OBLONGA, Wall. in Roxb. Fl. Ind. I. 432; DC. Prod. IV. 272.

HAB. Frequent in the drier hill-forests of the Martaban hills east of Tounghoo, at 4000 to 7000 ft. elevation.—Fl. Fr. March.

CAPRIFOLIACEÆ.

Conspectus of Genera.

Trib. 1. *SAMBUCEAE.* Corolla rotate or shortly tubular. Stigmas 3, sessile or on a very short style. Raphe introrse or lateral.

VIBURNUM. Ovary 1- rarely 2- or 3-celled. Berry by abortion 1-celled and 1-seeded. Leaves simple.

SAMBUCUS. Ovary 3—5-celled. Berry with 3 to 5 pyrenes. Leaves unpaired, pinnate or pinnatisect.

Trib. 2. *LONICEREAE.* Corolla-tube more or less elongate. Style filiform. Raphe extrorse.

LONICERA. Corolla tubular. Ovary and berry 2—3-celled, or the berry 1-celled by absorption of the septa.

SCYPHIPHORA. Corolla tubular-funnel-shaped, regular; ovary 2-celled, with a parietal 2-ovuled placenta protruding into the cells so as to form a spuriously 4-celled ovary; fruit a drupe.

Viburnum, L.

Conspectus of Species.

Leaves more or less stellately pubescent beneath; corymbs terminal, ... *V. fœtidum.*

Leaves glabrous; corymbs usually on axillary short branchlets; berries about 2 lin. long, broadly ovate, ... *V. Colebrookeanum.*

As preceding, but berries nearly 4 lin. long, elliptically oblong; corymbs terminal, .. *V. lutescens.*

1. V. FŒTIDUM, Wall. Cat. 466 and Pl. As. Rar. I. 49. t. 61; DC. Prod. IV. 325; Hf. and Th. in Linn. Proc. II. 175.

Var. β. PREMNACEA, Hf. and Th. l. c. (*V. premnaceum*, Wall. Cat. 461; DC. Prod. l. c.), corymb involucred by 3 or 4 small leaves, rest as in the typical form.

Var. γ. GRIFFITHIANUM, all parts more robust and more densely stellate-pubescent; leaves about 4 in. long, acuminate, 6—7-nerved on each side, the lower nerves not meeting at the base (in varr. α. and β. the leaves are trinerved at the base and, besides, have only 2—3 lateral nerves on each side). Most probably a good species.

HAB. Var. α. Ava, Taong-dong (Wall.); Var. γ. Burma, probably Ava (Griff. 3403).—Fr. Nov.

2. V. COLEBROOKEANUM, Wall. Cat. 460; DC. Prod. IV. 327.

HAB. Ava, Kakhyen hills; probably Hookhoom valley (Griff. 3398).

Sambucus, L.

1. S. THUNBERGIANA, Bl. ap. Miq. Ann. Mus. Lugd. Bat. II. 265.—

HAB. Ava, Khakyen hills (J. Anderson).—Fl. May.

Apparently well-distinguished from *S. adnata*, Wall., and occurs also in the Khasi hills.

Lonicera, L,

1. L. LEIANTHA, Kurz in Journ. As. Soc. Beng. 1874. 188.

HAB. Ava, Kakhyen hills (J. Anderson).—Fl. April.

Scyphiphora, Gærtn.

1. S. HYDROPHYLLACEA, Gærtn. Fruct. III. 91. t. 196; DC. Prod. IV. 377. (*Epithinia Malayana*, Jack in Mal. Misc. I. 12; WA. Prod. I. 424; *Epithiniæ* sp. Griff. Not. Dicot. 269. t. 478 and (sub nom. *Lumnitzera*) t. 644. A).

HAB. Not unfrequent in the mangrove swamps of the Andaman islands.—Fl. May.

RUBIACEÆ.

Conspectus of Genera.

Subd. 1. *CINCHONEÆ.* Fruit a dehiscent capsule, dry or very rarely succulent, very rarely a berry or drupe and in this case the seeds always winged or appendaged. Ovary 2 to more-celled, with 1 to many ovules in each cell. Seeds various. Stipules interpetiolar.

* *Ovules numerous in each cell. Capsule dry or more or less succulent.*

Trib. 1. *NAUCLEEÆ.* Flowers inserted upon a thickened receptacle and forming heads. Capsule dehiscing from the base or otherwise, dry or rarely (in *Sarcocephalus*) berry-like.

× Capsule berry-like, dehiscing from the base. Trees.

Sarcocephalus. Capsule 2-celled, or the 2 cells augmented by 2 superposed empty cells, more or less united in a fleshy syncarp.

× × Capsule dry, dehiscing loculicidally or septicidally into two many-seeded cocci. Trees or erect shrubs.

Nauclea. Flowers without bractlets. Capsule 2-celled. Trees or erect shrubs.

Stephegyne. Flowers surrounded by angular-club-shaped bractlets. Capsule 3-celled. Trees.

Uncaria. Flowers sessile or pedicelled, destitute of bractlets. Capsule dehiscing in longitudinal slits. Scandent hook-bearing shrubs.

Trib. 2. *EU-CINCHONEÆ.* Flowers panicled or corymbose, never in heads. Capsule 2-celled, dehiscing septicidally into 2 valves or into 4 apical valves.

× Capsule septicidally dehiscing into 2 woody valves.

+ Corolla imbricate.

Luculia. Calyx-limb deciduous. Stamens included. Corymbs terminal, without floral leaves. Trees.

+ + Corolla valvate.

Hymenodictyon. Inflorescence furnished with conspicuous discoloured floral leaves. Trees.

× × Capsule dehiscing at the apex into 4 valves. Corolla valvate.

Hymenopogon. Inflorescence furnished with conspicuous discoloured floral leaves. Epiphytical shrubs.

Trib. 3. *HEDYOTIDEÆ.* Ovary 2—4-celled, the cells many- or few-ovuled, the ovules laterally attached. Capsule dehiscing in various ways or separating into 2—4 cocci, rarely indehiscent.

× Stipules connate or free, neither sheathing nor setaceously fringed (*Rondeletieæ*).

+ Stigma 2-lobed or 2-cleft. Corolla imbricate or twisted. Anther-cells blunt.

Wendlandia. Corolla tubular, twisted. Capsule opening into two apical valves. Trees or shrubs.

Spiradiclis. Corolla-tube short. Capsule dehiscing into two valves which again separate into 2 valves inflected with their margins. Erect herbs.

Ophiorrhiza. Corolla funnel-shaped or tubular. Placenta free, erect. Capsule compressed, divaricately 2-lobed, opening loculicidally by an apical slit. Herbs.

+ + Stigma capitate. Corolla valvate. Anther-cells prolonged into a setaceous sterile appendage.

Argostema. Corolla almost rotate, the limb 3—5-cleft. Anthers dehiscing longitudinally or by 1 or 2 apical pores. Capsule dehiscing by 4 apical valves. Herbs of the habit of *Sonerila*.

× × Stipules adnate to the petiole and sheathing at the base, setaceously fringed. (*Eu-Hedyotideæ.*)

Dentella. Flowers 5-merous, the petals 2- or 3-toothed. Capsule indehiscent.

Hedyotis. Flowers 4—5-merous, the petals entire. Capsule dehiscing loculicidally or septicidally, rarely almost indehiscent.

Scleromitrion. As preceding, but capsule separating into 2 or 4 several-seeded cocci.

* * *Ovules and seeds solitary in each cell.*

Trib. 4. *SPERMACOCEÆ.* Capsules distinct, dehiscing, or separating into cocci,

rarely indehiscent. Flowers not in heads. Corolla without toothlets between the lobes. Corolla valvate. Radicle inferior.

Spermacoce. Ovule attached to or below the middle of the cell. Capsule dehiscing septicidally from the apex. Herbs.

Hydrophylax. As preceding, but capsules indehiscent. Herbs.

Knoxia. Ovule attached at or below the summit of the cell. Capsule dehiscing from the base into two deciduous cocci, leaving the persistent setaceous axis. Herbs.

Trib. 5. *CEPHALANTHEÆ.* Capsules indehiscent, usually united into a syncarp. Corolla imbricate. Radicle superior.

Cephalanthus. Corolla-lobes with toothlets in their sinuses. Capsules berry-like, connate. Flowers in heads.

Subord. II. EU-RUBIACEÆ. Fruit a more or less fleshy drupe or rarely a berry 1 to many-celled. Ovary-cells 1 to many-ovuled. Seeds never winged nor appendaged. Stipules interpetiolar or developed into leaves, or rarely none.

* *Stipules interpetiolar, various.*

\+ Seeds enclosed in pyrenes of a coriaceous, crustaceous, or chartaceous texture. Ovules solitary in each cell. Radicle inferior.

Trib. 1. *PÆDERIEÆ.* Ovule and the seed pendulous. Drupe dry, crustaceous or chartaceous, irregularly rupturing.

Pæderia. Corolla valvate. Cocci thin-chartaceous, expanded into wings. Twiners, the leaves opposite or whorled.

Trib. 2. *COFFEEÆ.* Ovary 2—9- (very rarely 1-) celled, the solitary ovules erect or attached to the middle of each cell. Berry consisting of 2 or more (rarely a single) one-seeded coriaceous or chartaceous pyrenes.

* *Ovules erect and basal. Albumen often fleshy. Corolla valvate.*

× Ovary 4—9- (rarely 2-) celled. (*Lasianthœ*).

Lasianthus. Calyx more or less toothed. Styles and ovary-cells 4—9. Flowers clustered or cymose, axillary. Shrubs.

× × Ovary 2- (very rarely 1-) celled. (*Psychotriœ*).

Nertera. Flowers hermaphrodite or unisexual. Corolla 4- or 5-lobed. Style 2-parted almost to the base, hirsute. Creeping herbs.

Cephaëlis. Corolla funnel-shaped, the tube long. Calyx 4- or 5-toothed or -lobed. Flowers in heads or solitary, axillary. Herbs or under-shrubs.

Hydnophytum. Calyx-limb entire. Corolla-tube short. Flowers sessile, clustered. Epiphytical shrubs with tuberous trunks.

Psychotria. Corolla-tube short, the throat bearded. Pyrenes flat or entire on the inner face. Flowers cymose or cymosely panicled. Shrubs, rarely scandent.

Chasalia. Corolla-tube elongate, the throat naked. Pyrenes carved out on the inner face along the central placenta. Inflorescence of *Psychotria*. Shrubs or under-shrubs.

Saprosma, Corolla funnel-shaped, velvety, often almost oblique. Berry 1- rarely 2-seeded. Flowers terminal and axillary. Stipules free. Shrubs or trees.

* * *Ovules attached to the middle or above the middle of the septum. Corolla twisted. Albumen often horny.* (Ixoreæ).

Coffea. Corolla funnel-shaped, the limb 4—7-parted. Berry 2 or rarely 1-seeded, the pyrenes chartaceous. Flowers terminal and axillary. Stipules free.

Ixora. Corolla salver- or nearly funnel-shaped, the limb 4- or 5-parted. Flowers corymbose or panicled, Stipules connate.

Trib. 3. *MORINDEÆ.* Ovary 2—4-celled, the solitary ovules attached to the middle or below the middle of the cell. Corolla valvate. Berries free or often united in a syncarp.

* *Berries free, not connate.*

Gynochtodes. Calyx-limb truncate. Style 2-cleft. Ovary 4-celled. Flowers clustered, axillary. Scandent shrubs.

* * *Berries united into fleshy syncarps.*

Morinda. Berries fleshy. Pyrenes appendaged. Trees or shrubs.

\+ + Seeds free, not enclosed in distinct pyrenes.

Trib. 4. *VANGUERIEÆ.* Ovary many-celled, the cells with a solitary pendulous ovule attached above the middle or near the apex of the cells. Fruit a drupe, the putamen 1 to many-celled. Albumen usually fleshy. Radicle superior.

* *Corolla valvate. Ovule attached laterally or below the summit of the cell.* (Eu-Vanguerieæ).

Vangueria. Stigma discoid. Ovary usually 5-celled.

Plectronia. Ovary 2-celled, the stigma capitate, oblong or mitre-shaped. Drupe didymous or occasionally almost 1-celled by abortion.

* * *Corolla imbricate. Ovule suspended from the summit of the cell.*

Guettarda. Stigma simple, thick. Drupe globose, rather large, the putamen many-celled.

Polyphragmon. Stigmas as many as ovary-cells. Berry 5—10-celled, the seeds pyrene-like. Anomalous genus.

Trib. 5. *RANDIEÆ.* Ovary 1-celled, with parietal placentas or more usually 2- or more-celled, with numerous ovules in each cell.

* *Corolla imbricate or twisted.*

× Ovary 1-celled, with 4 or 5 parietal placentas. (*Gardenieæ*).

Gardenia. Flowers often conspicuous. Stigma entire, sulcate-twisted. Berry usually large, many-seeded, the seeds imbedded in pulp.

× × Ovary 2-celled (*Eu-Randieæ*).

Randia. Stigma 2-lobed; style thickened spindle-like. Berry large, the seeds imbedded in pulp. Trees or shrubs, erect.

Griffithia. Stigma 2-lobed; style not thickened. Berries small, not pulpy. Scandent shrubs, often armed.

Webera. Stigma simple; style not thickened, filiform. Berries small, not pulpy. Erect trees or shrubs, unarmed.

Diplospora. Style 2-cleft. Berries rather large, not pulpy. Seeds in 2 rows in each cell. Erect trees or shrubs, unarmed.

Hypobathrum. Styles 2-lobed. Berry small, stalked or sessile, not pulpy. Seeds in a single row in each cell. Erect shrubs or trees.

Brachytome. Flowers polygamously dicœcious. Corolla funnel-shaped, glabrous. Style shortly 2-lobed. Berry small, not pulpy. Seeds very numerous. Erect shrubs.

Morindopsis. Flowers dicœcious, in peduncled heads. Calyx-limb cupular or 4-toothed. Corolla-throat villous. Style hirsute. Berry elongate, cylindrical, the numerous seeds imbricately pendulous, almost appendaged. Trees.

* * *Corolla valvate.*

× Ovary 2-celled, the placentas 2-cleft. Corolla reduplicate-valvate. (*Mussændeæ*).

Mussænda. The one or other calyx-lobe of the outer flowers extended into a discoloured leaf. Connective not mucronate. Style-branches 2.

Acranthera. Calyx-teeth all conform, not appendaged. Connective mucronate-produced. Stigma clavate.

× × Ovary usually 5—6- (rarely 2—3-) celled, the placentas simple. (*Urophylleæ.*)

Adenosacme. Calyx 5—4-cleft. Corolla-throat naked. Ovary 5—3-celled. Cymes or corymbs terminal or nearly so, rarely lateral.

Myrioneuron. As preceding, but ovary 2-celled.

Urophyllum. Calyx entire or minutely toothed. Corolla-throat bearded. Flowers clustered or cymose, axillary.

* * *Stipules transformed into leaves and forming whorls, or rarely the leaves opposite and the stipules wanting.*

Trib. 6. *STELLATÆ.* Calyx entirely adnate to the calyx or the calyx-limb 4—6-cleft. Corolla valvate. Ovary 2-celled, the ovules solitary, erect or ascending. Drupe indehiscent, dry or sappy, often didymous.

Rubia. Flowers 5-merous. Drupe sappy. Erect or twining herbs.

Galium. Flowers 4-merous. Drupe usually didymous or globose, dry. Herbs or under-shrubs.

Sarcocephalus, Afz.

Conspectus of Species.

Subg. 1. *Eu-Sarcocephalus.* Capsules succulent and connate, 2-celled throughout. All parts glabrous, the young branchlets pruinous ; leaves more or less acuminate, .. *S. Cadamba.*

Subg. 2. *Anthocephalus.* Capsules less succulent, not connate, 2-celled with 2 superposed spurious sterile cells.
Young shoots glabrous or pubescent ; leaves more or less blunt, ... *S. cordatus.*

1. S. Cadamba, (*Anthocephalus Cadamba*, Miq. Fl. Ind. Bat. II. 135 ; Bedd. Fl. Sylv. t. 35 ; *Nauclea Cadamba*, Roxb. Fl. Ind. I. 513).

Hab. In the moister upper mixed forests of the eastern slopes of the Pegu Yomah, descending into the lower mixed forests.—Fl. Decb.

2. S. cordatus, Miq. Ind. Bat. II. 133 ; Bedd. Fl. Sylv. t. 318. (*Nauclea cordata*, Roxb. Fl. Ind. I. 509 ; *Nauclea coadunata*, Sm. in Rees. Cycl. XXIV ; DC. Prod. IV. 344 ; *Nauclea Wallichiana*, R. Br. in Wall. Cat. 6098 ; Don. Gen. Syst. III. 467).

Var. *α.* glabra, leaves and all other parts quite glabrous.

Var. *β.* pubescens, leaves beneath, petioles, stipules, and peduncles shortly and softly pubescent.

Hab. Both varieties frequent in the mixed forests (especially the lower ones) and in the savannahs, all over Pegu and Martaban down to Tenasserim.—Fl. May.

Nauclea, L.

Conspectus of Species.

Subg. 1. *Eu-Nauclea.* Corolla slightly imbricate in bud. Flowers without bractlets. Flowers solitary or by threes, terminal.

* All parts (at least the leaves) glabrous.

Leaves acuminate, the petiole ½—1 in. long; flower-heads often by threes, ... *N. excelsa.*

Leaves blunt, almost sessile; flower-heads solitary, ... *N. sessilifolia.*

* * All parts more or less pubescent.

Leaves cordate, petioled; flower-heads by 1—3, axillary, ... *N. cordifolia.*

Subg. 2. *Adina*, Salisb. Corolla valvate. Flowers surrounded by bractlets.

* Flower-heads small, panicled.

All parts glabrous; leaves petioled, ... *N. polycephala.*

* * Flower-heads larger, panicled. Bractlets angular-club shaped.

× Petiole very slender and thin; leaves thin-membranous, acute at the base.

Bractlets only half as long as the calyx; corolla-lobes about ¼ the length of the corolla-tube; flower-heads more constantly solitary between 2 floral leaves, .. *N. parvifolia.*

Bractlets as long as the calyx; corolla-lobes about ¼ the length of the tube; floral leaves very deciduous, the flower-heads soon forming dichotomous divaricate panicles, ... *N. diversifolia.*

× × Petiole very thick and pubescent; leaves large, cordate at the base.

Flower-heads dichotomously panicled; leaves wrinkled above; corolla-lobes as long as the short tube, ... *N. rotundifolia.*

1. N. EXCELSA, Bl. Bydr. 1009; Miq. Fl. Ind. Bat. II. 139. (*N. peduncularis*, Wall. Cat. 6091; Don. Gen. Syst. III. 469; Bedd. Icon. t. 235 ?).

HAB. Pegu Yomah, at Myodwine (Dr. Brandis).—Fl. Octob.

2. N. SESSILIFOLIA, Roxb. Fl. Ind. I. 515. (*N. sericea*, Wall. Cat. 6095; Don. Gen. Syst. III. 467).

HAB. Frequent in the mixed forests, especially the upper ones, and in the savannahs, all over Pegu; also Chittagong.—Fl. end of RS.; Fr. Decb., Jan.

3. N. CORDIFOLIA, Roxb. Corom. Pl. I. t. 53 and Fl. Ind. ed. Wall. II. 122; DC. Prod. IV. 346; WA. Prod. I. 391. (*Adina cordifolia*, Bth. and Hf. in Brand. For. Fl. 263. t. 33; Bedd. Fl. Sylv. t. 33).

HAB. Frequent in the leaf-shedding forests, especially the lower ones, but also in the low and dry forests, from Ava and Martaban to Prome and Pegu, up to 1500 ft. elevation.—Fl. HS.; Fr. Begin of CS.

4. N. POLYCEPHALA, Wall. Cat. 6100; Don. Gen. Syst. III. 467. (*Adina polycephala*, Bth. Fl. Hongk. 146; Miq. in Ann. Mus. Lugd. Bat. III. 183; *N. aralioides*, Miq. Fl. Ind. Bat. II. 344).

HAB. Chittagong (Hf. and Th.); Tenasserim (Griff. 2751).

5. N. PARVIFOLIA, Roxb. Corom. Pl. I. 40. t. 82. and Fl. Ind. I. 513; DC. Prod. IV. 344.; Wight Ill. t. 123.—(*Stephegyne parvifolia*, Korth. in Verh. Nat. Gesch. Bot. 161; Bedd. Fl. Sylv. t. 34).

Var. *α.* GENUINA, bractlets only half as long as the calyx; flower-heads more constantly solitary between 2 longer-persistent floral leaves.

Var. *β.* DIVERSIFOLIA, (*N. diversifolia*, Wall. Cat. 6096; Don. Gen. Syst. III. 467), leaves much larger, from 3 to 6 in. long, beneath more conspicuously pubescent; stipules pubescent; bractlets as long as the calyx.

Var. *γ.* MICROPHYLLA, leaves small, only 1—2 in. long, minutely and inconspicuously pubescent beneath; stipules glabrous; bractlets as long as the calyx.

HAB. Var. *α.* not yet found in Burma; var. *β.* frequent in the mixed forests and in savannahs, all over Burma from Ava and Martaban down to Upper Tenasserim; var. *β.* exclusively in the savannahs.—Fl. Sept., Oct. Fr. CS.

6. N. ROTUNDIFOLIA, Roxb. Fl. Ind. I. 516, non Bartl. (*N. Brunonis*, Wall. Cat. 6097; Don. Gen. Syst. III. 467).

HAB. Frequent in the mixed forests, especially the upper and lower ones, all over Pegu and Martaban down to Tenasserim; also Chittagong. —Fl. end of RS.; Fr. CS.

Uncaria, Schreb.

Conspectus of Species.

* *Capsule long-stalked. Leaves more or less pubescent beneath.*

Flowers large, the pedicels 1—2 lin. long, velvety; calyx ½ in. long; corolla hirsute, .. *U. ferruginea.*

Flowers almost sessile; calyx 2 lin. long; corolla velvety, ... *U. sessilifolia.*

* * *Capsule sessile.*

× Calyx-limb long-toothed.

All parts more or less woolly pubescent, ... *U. pilosa.*

× × Calyx almost truncate or obscurely 5-toothed. Leaves glabrous.

Leaves green on both sides; corolla glabrous, ... *U. lævigata.*

Leaves glaucous beneath; corolla-lobes velvety, ... *U. sessilifructus.*

1. U. FERRUGINEA, DC. Prod. IV. 348. (*U. speciosa*, Wall. Cat. 6106).

HAB. Tropical forests of the eastern slopes of the Pegu Yomah, as in the Choungmenah valley (Khaboung), rare; Tenasserim, apparently frequent.

2. U. SESSILIFOLIA, Roxb. in Wall. Cat. 6107 and Icon. ined. XVIII. t. 79.

HAB. Tropical forests in the Choungmenah valley (Khaboung) of the eastern slopes of the Pegu Yomah, rather rare; Tenasserim, Tavoy (Wall. Cat. 6106. B).—Fl. Sept., Oct., Fr. March.

Roxburgh's figure represents the leaves as almost sessile. Is Wallich's identification with the above correct?

3. U. PILOSA, Roxb. Fl. Ind. ed. Wall. II. 130; DC. Prod. IV. 348.

HAB. Not uncommon in the tropical forests of the Pegu Yomah and from Martaban down to Tenasserim; also Ava hills.—Fl. begin of RS.; Fr. Nov., Dec.

4. U. LÆVIGATA, Wall. Cat. 6111.

HAB. Rare in the tropical forests of the Choungmenah valley (Khaboung) of the eastern slopes of the Pegu Yomah; Tenasserim, Amherst (Wall.)—Fl. Febr.

5. U. SESSILIFRUCTUS, Roxb. Fl. Ind. I 520; DC. Prod. IV. 349.

HAB. Tropical forests of Pegu and Tenasserim; Ava, Khakyen hills (J. Anderson).—Fr. Nov., Dec.

Luculia, Sw.

1. L. GRATISSIMA, Sweet Brit. Fl. Gard. t. 145; DC. Prod. IV. 358; Bot. Mag. t. 3946; Lodd. Cab. t. 1919.—(*Cinchona gratissima*, Wall. in Roxb. Fl. Ind. II. 154 and Tent. Fl. Nepal. I. 30. t. 21).

HAB. Ava, hills east of Bhamo (J. Anderson).—Fl. Sept.

Hymenodictyon, Wall.

1. H. THYRSIFLORUM, Wall. in Roxb. Fl. Ind. II. 151; DC. Prod. IV. 358. (*Cinchona thyrsiflora*, Roxb. Fl. Ind. I. 529; *H. Horsfieldii*, Miq. Fl. Ind. Bat. II. 158).

HAB. Rather rare in the upper mixed forests of the Pegu Yomah, but frequent in the dry forests of Prome; also Chittagong.—Fl. Aug.; Fr. CS.

Hymenopogon, Wall.

1. H. PARASITICUS, Wall. in Roxb. Fl. Ind. II. 156; DC. Prod. IV. 351.

HAB. Epiphytic on mossy trees of the upper dry forests on the Kambala ridges of the Pegu Yomah, at about 3000 ft. elevation.—Fr. CS.

Wendlandia, Bartl.

Conspectus of Species.

Subg. 1. *Wendlandia.* Flowers 5-merous, sessile or shortly pedicelled, in short spikelets, racemes, or clusters, forming thyrsoid panicles.

* *Calyx-teeth short, triangular-acute.*

All parts and leaves on both sides harshly and shortly pubescent, ... *W. scabra.*

Leaves beneath more or less shortly pubescent or almost glabrescent; panicles pubescent or tomentose, ... *W. tinctoria.*

All parts (also the panicle) quite glabrous; flowers minutely pedicelled, .. *W. glabrata.*

* * *Calyx-teeth subulate-acuminate, as long as or longer than the calyx-tube.*

Leaves coriaceous, glabrous, ... *W. ligustrina.*

Leaves lanceolate, membranous, appressed pubescent on the midrib beneath, .. *W. glomerulata.*

Subg. 2. *Greenia*, WA. Flowers 4- or 5-merous, in one-sided spikes, forming divaricate corymbose panicles.

All parts glabrous ; flowers 5—4-merous, ... *W. secunda.*

All parts more or less tawny pubescent ; flowers 4-merous, ... *W. corymbosa.*

1. W. SCABRA, Kurz in Journ. As. Soc. Beng. 1872. 310.

HAB. Ava, hills east of Bhamo (J. Anderson).—Fr. May.

2. W. TINCTORIA, DC. Prod. IV. 411 ; Miq. Fl. Ind. Bat. II. 158. (*Rondeletia tinctoria*, Roxb. Fl. Ind. ed. Wall. II. 134).

HAB. Frequent in the open and dry forests, ascending into the drier hill-forests up to 4000 ft. elevation, from Ava and Martaban down to Tenasserim.—Fl. Febr., March ; Fr. March, April.

3. W. GLABRATA. DC. Prod. IV. 411 ; Miq. Fl. Ind. Bat. II. 158.

HAB. In the drier hill-forests of the Martaban and Tenasserim hills, at 2000—4000 ft. elevation.—Fl. March.

4. W. LIGUSTRINA, Wall. Cat. 6272 ; Walp. Rep. II. 505.

HAB. Ava, Taong dong (Wall.) and Kakhyen hills east of Bhamo (J. Anderson) ; Tenasserim (Helfer), a variety with longer corolla-tube.—Fl. Nov. ; March.

5. W. GLOMERULATA, Kurz in Journ. As. Soc. Beng. 1872. 310.

HAB. Tenasserim, Mergui (Helfer).

6. W. SECUNDA, Griff. Not. Dicot. 266. (*Greenia Wightiana*, WA. Prod. I. 404 ; Wight Icon. t. 1161).

HAB. Tenasserim, Mergui, in forests near Culweng (Griff.).—Fl. Aug.

7. W. CORYMBOSA, DC. Prod. IV. 413. (*Rondeletia corymbosa*, Jack in Mal. Misc. I. No. 1. 4. ; *W. spicata*, DC. l. c. ; *Rondeletia spicata*, Wall. in Roxb. Fl. Ind. II. 139 ; *Greenia Jackii*, WA. Prod. I. 404, in adn.).

HAB. Tenasserim (Helfer 2843).

Spiradiclis, Bl.

Conspectus of Species.

Stems, petioles, and inflorescence shortly pubescent ; capsule globular 2-lobed, .. *S. bifida.*

All parts quite glabrous ; capsule oblong, ... *S. cæspitosa.*

1. S. BIFIDA, Kurz in Journ. As. Soc. Beng. 1872. 310. (*Pleotheca? bifida*, Wall. Cat. 6216 ; Hf. in Bth. and Hf. Gen. pl. II. 62).

HAB. Martaban hills, rare along choungs.

2. S. CÆSPITOSA, Bl. Bydr. 975 ; DC. Prod. IV. 418. (*S. cylindrica*, Hf. in Bth. and Hf. Gen. plant. II. 62).

HAB. Rare along choungs in the hills of Martaban.

Ophiorrhiza, L.

Conspectus of Species.

* *Cymes all terminal, on peduncles* 1—3 *in. long. Calyx-teeth short, triangular.*
× Bractlets conspicuous, subulate, up to a line long.
All parts glabrous; leaves long-acuminate, ... *O. gracilis.*
× × Bracts subulate, usually persistent, but the bractlets very minute if any.
All parts (also the capsule) glabrous, ... *O. Mungos.*
Stems and petioles brown-pubescent; leaves thick-membranous, whitish beneath; capsule glabrous, ... *O. argentea.*
As preceding, but leaves only pale-coloured beneath, the inflorescence more hispid-pubescent; capsule minutely hispid, ... *O. villosa.*
* * *Cymes terminal and axillary, on very short peduncles only* 4—6 *lin. long, or almost sessile. Calyx-teeth lanceolate, acute.*
Stem, petioles and peduncles more or less shortly pubescent; lateral branches all shortened, ... *O. erubescens.*

1. O. GRACILIS, Kurz in Journ. As. Soc. Beng. 1872. 311.

HAB. Tenasserim, Attaran (Brandis).

2. O. MUNGOS, L. Amæn. Acad. II. 127; Roxb. Fl. Ind. I. 901; DC. Prod. IV. 414; Miq. Fl. Ind. Bat. II. 166.

Var. *α.* GENUINA, capsule about 3 lin. across, emarginate, the lobes somewhat acute.

? Var. *β.* ORTHOCARPA, capsule about 2 lin. across, truncate at the apex, the lobes blunt or almost truncate.

HAB. Var. *β.* only, Martaban hills, at 3000 ft. elevation (Dr. Brandis).

Dr. Brandis' specimens are not sufficient to enable one to make out whether they should not rather form a distinct species. The true Linnean species is a sea-shore plant, growing chiefly in the beach-forests, most probably also growing along the Burmese coasts.

3. O. ARGENTEA, Wall. Cat. 6229; Walp. Rep. II. 503.

HAB. Chittagong; Arracan, on sandstone rocks in the tropical forests of Boronga island.—Fl. Fr Octob.

Probably not sufficiently distinct from *O. canescens*, Bl.

4. O. VILLOSA, Roxb. Fl. Ind. ed. Wall. II. 546; DC. Prod. IV. 415. (*O. rugosa* Wall. in Roxb. Fl. Ind. II. 546; DC. l. c. 416; Miq. in Ann. Mus. Lugd. Bat. IV. 232; *O. hispidula*, Wall. Cat. 6234; Don. Gen. Syst. III. 523; *O. trichocarpa*, Bl. Bydr. 977; Miq. Fl. Ind. Bat. II. 173).

HAB. Frequent in the tropical forests, from Chittagong and Ava down to Tenasserim and the Andamans. Fl. April, June; Fr. Aug., Sept.

5. O. ERUBESCENS, Wall. Cat. 6233; Don. Gen. Syst. III. 522.

HAB. Not uncommon in the hill-forests of Martaban and Tenasserim (Chappedong-hills, Wall.) at 3000 to 5000 ft. elevation.—Fl. March.

Argostema, Wall.

Conspectus of Species.

* *Flowers 5-merous.*

× Leaves reduced to bract- or stipule-like leaflets, of which only 1 or 2 are fully developed.

All parts glabrous; leaf solitary; anthers oblong, blunt, ... *A. unifolium.*
Umbels stiff-hairy; leaves two, ... *A. Tavoyana.*

× × Leaves all developed but very unequal, whorled, or crowded at the apex of the stem.

Glabrous or nearly so; anthers free, linear, acuminate, opening by terminal pores, .. *A. verticillatum.*

* * *Flowers 4—3-merous.*

Stem, inflorescence, and petiole villous-pubescent; leaves sparingly pubescent, cordate, bluntish or acute; flowers in peduncled umbels or cymose umbels, .. *A. soneriloides.*
Quite as preceding, but flowers solitary on a short pedicel, or by 2 or 3 on a very short peduncle, pale rose-coloured, ... *A. oligantha.*

1. A. UNIFOLIUM, Benn. in Horsf. Plant. Jav. rar. 94; Miq. Fl. Ind. Bat. II. 161.

HAB. Upper Tenasserim, Moulmein and Attaran (R. Scott, Dr. Brandis).—Fl. July.

In my specimens the anthers are blunt and not beaked as Bennet describes them.

2. A. TAVOYANUM, Wall. ap. Benn. in Horsf. Pl. Jav. rar. 95.

HAB. Tenasserim, Tavoy (Wall.). Unknown to me.

3. A. VERTICILLATUM, Wall. in Roxb. Fl. Ind. II. 325.

HAB. Tenasserim, Moulmein (Rev. Parish, R. Scott).—Fl. July.

4. A. SONERILOIDES, Kurz in Journ. As. Soc. Beng. 1872.

HAB. Pegu, abundant on the pagodas of Rangoon (R. Scott.)—Fl. July, Aug.

5. A. OLIGANTHA, Kurz MS.

HAB. On damp rocks in the coast-forests of South Andaman (Watering Cove).—Fl. June.

A small species of *Argostema*, with slightly pubescent leaves solitary or by pairs, occurs on damp rocks of the tropical forests on Boronga island, Arracan, but the specimens are too few and reduced to admit of description. Its calyx-lobes are blunt or rather retuse.

Dentella, Forst.

1. D. REPENS, Forst. Gen. 26. t. 13; DC. Prod. IV. 419; Roxb. Fl. Ind. I. 532; Miq. Fl. Ind. Bat. II. 196. (*Lippaya telephioides*, Endl. Atakt. 13. t. 13).

HAB. Common in agrarian lands and along river-banks, all over Burma from Chittagong and Ava down to Tenasserim and the Andamans (here introduced only).—Fl. Fr. ∞.

Hedyotis, L.

Conspectus of Species.

* *Capsule loculicidally dehiscent.*

Subg. 1. *Oldenlandia*, L. Capsule more or less hemispherical or obsoletely 2-lobed, opening loculicidally. Annual, rarely perennial herbs.

* *Prostrate or diffuse herbs. Flowers solitary, or in cymes or clusters in the axils of the leaves (rarely also terminal). Root sometimes turning perennial.*

× Leaves more or less oval, petioled.

Flowers solitary, sessile or nearly so. ..... *H. tinervia.*

× × Leaves linear to narrow-linear, rarely lanceolate, more or less sessile.

\+ Flowers solitary or by 2—3 on an axillary peduncle.

Flowers solitary, on very short strong pedicels; leaves membranous, flat, .. *H. ramosissima.*

Flowers by 2—3, rarely solitary, on a capillary peduncle; pedicels very long and capillary; leaves membranous, flat, ... *H. biflora.*

\+ + Flowers by 4 or more, forming axillary and terminal clusters or cymes. Leaves more or less revolute on their margins, somewhat rigid.

Flowers in peduncled cymes or the cymes umbel-like, ... *H. umbellata.*

Flowers in sessile clusters, ... *H. angustifolia.*

* * *Erect annuals. Flowers in terminal panicles or cymes, or solitary, rarely the inflorescence also axillary.*

× Leaves sessile or nearly so.

Leaves sagittate at the base, shortly bristly rough; flowers pale-blue, by 3—4 terminal, and also singly from the leaf-axils; pedicels long and capillary, ... *H. linoides.*

Leaves linear; corolla about an inch long, brownish purple, ... *H. gracilis.*

× × Leaves more or less petioled, more or less tapering at the base.

\+ Calyx only $\frac{1}{3}$—$\frac{1}{2}$ lin. long.

All parts sparingly pilose; leaves acute; cymes peduncled, axillary and terminal; pedicels capillary, 3—4 lin. long, ... *H. Wallichii.*

Stem villous-pubescent, the leaves often whorled at the end of the nude scape-like stem; cymes divaricate, peduncled, terminal; pedicels capillary, 2—4 lin. long, .. *H. spergulacea.*

\+ + Calyx $\frac{3}{4}$—2 lin. long. Flowers in racemes or cymes, terminal and in the axils of the upper-leaves.

Glabrous, more or less succulent; flowers slenderly pedicelled; capsule not winged, the crowning calyx-lobes very short, ... *H. paniculata.*

Stems, and nerves beneath, shortly pubescent; flowers sessile or nearly so; capsule more or less compressed and winged, the crowning lobes nearly a line long, .. *H. Andamanica.*

* * *Capsules opening septicidally.*

Subg. 2. *Dimetia*, WA. Capsule opening septicidally at the apex by a gaping short slit, more or less truncately hemispherical and obscurely 2-lobed. Scandent, diffuse or erect perennials. Flowers in small heads, forming axillary and terminal peduncled cymes or panicles. Corolla often villous within.

Glabrous or pubescent; flowers sessile or nearly so; nerves of leaves prominent, .. *H. capitellata.*

Scandent or diffuse, quite glabrous, glaucous; flowers pedicelled; calyx-lobes acute, ..*H. scandens.*

Erect, branched, quite glabrous; flowers sessile; calyx-lobes broad and blunt, *H. elegans.*

Subg. 3. *Metabolos*, Bl. Capsule septicidally dehiscent or nearly so, hemispherical and more or less truncate at the apex, often obscurely 2-lobed. Diffuse or half-scandent, rarely erect perennials. Flowers in axillary (very rarely terminal) clusters or cymes.

* *Flowers in axillary peduncled cymes. Prostrate or diffuse perennials.*

× Flowers pedicelled, in loose cymes.

All parts more or less pubescent; calyx-lobes longer than the tube, ...*H. ulmifolia.*

All parts glabrous; calyx-teeth minute, ...*H. glabra.*

× × Flowers sessile or nearly so, in little heads collected into peduncled cymes or clusters.

Flowers minute, pale blue; capsule only about ½ lin. across, ...*H. costata.*

* * *Flowers sessile or very shortly pedicelled, in axillary or terminal clusters or heads.*

Prostrate or diffuse, all parts more or less pubescent; clusters axillary,..*H. auricularia.*

Erect, slightly pubescent; clusters terminal, involucred by the 4 or 5 uppermost leaves, ..*H. scabra.*

1. H. TRINERVIA, Roem. and Schult, Syst. Veg. III. 197; Bedd. Icon. t. 29. (*Oldenlandia trinervia*, Retz. Obs. IV. 23; Miq. Fl. Ind Bat. II. 189).

HAB. Chittagong (Hf. and Th.); Arracan, in grassy spots of the beaches near Akyab.—Fl. Fr. Decb.

2. H. RAMOSISSIMA, Spreng. Pugill. II. 32, non Bl. (*Oldenlandia brachypoda*, DC. Prod. IV. 424; Miq. Fl. Ind. Bat. II. 187; *Oldenlandia diffusa*, Roxb. Fl. Ind. I. 423).

HAB. Not unfrequent along the larger rivers, like Sittang, Irrawadi, etc., also in cultivated lands, from Ava down to Pegu and Martaban.—Fl. Fr. DS.

3. H. BIFLORA, Sm. in Rees Cycl. XVII. 15. (*Oldenlandia biflora*, L. sp. pl.; Roxb. Fl. Ind. I. 423; *Oldenlandia Burmanniana*, R. Br. in Wall. Cat. 868; Miq. Fl. Ind. Bat. II. 189; *Oldenlandia herbacea*, DC. Prod. IV. 425; Bth. Fl. Hongk. 151; *H. diffusa*, Willd. sp. pl. I. 566).

Var. *α.* GENUINA, flowers by 2—3 on very slender pedicels.

Var. *β.* UNIFLORA, flowers solitary on a very slender pedicel.

Var. *γ.* GRAMINICOLA, (*H. graminicola*, Kurz in Trim. Journ. Bot. 1875. 326), leaves narrower and stiffer; flowers solitary on very slender axillary pedicels, or by twos and slenderly peduncled; corolla 2 lin. long or somewhat longer; style exserted.

Var. *δ.* CORYMBOSA, (*Oldenlandia corymbosa*, L. Herb.; DC. Prod. IV. 426; *Oldenlandia ramosa*, Roxb. Fl. Ind. ed. Wall. II. 445; Wight. Icon. t. 822; DC. Prod. IV. 426), flowers by 2—3 and cymose umbellate by 3—7.

HAB. Common in agrarian lands on river-banks, along road-sides, &c., also in grassy spots in the leaf-shedding forests, all over Burma; var. *β.*

and δ. in agrarian and dry grass-lands of Ava and Pegu, also Andamans.—Fl. Fr. ∞.

4. H. UMBELLATA, WA. Prod. I. 413. (*Oldenlandia umbellata*, L. sp. pl. 174; Roxb. Corom. Pl. I. t. 3 and Fl. Ind. I. 421; Miq. Fl. Ind. Bat. II. 191).

HAB. Burma, probably Ava (Griff. 2895/2).

5. H. ANGUSTIFOLIA, Cham. and Schlecht. in Linn. 1829. 153; DC. Prod. IV. 419. (*H. pinifolia*, Wall. Cat. 850; Don. Gen. Syst. III. 526).

HAB. Tenasserim, Amherst (Wall. Cat. 850 A).

6. H. LINOIDES, Griff. Not. Dicot. 265. (*H. arguta*, R. Br. in Wall. Cat. 864).

HAB. Tenasserim, Tavoy (Wall.); Mergui, in moist sandy places, near Culweng. (Griff.).—Fl. Octob.

7. H. GRACILIS, Wall. in Roxb. Fl. Ind. I. 377, non DC. (*H stricta*, Wall. in As. Research. XIII. 369, non Sm.; *H. fusca*, Ham. in Don. Prod. Nep. 134; *H. aspera*, Heyne in Roth. Nov. sp. 93, cum syn.; *Kohautiæ* sp. Griff. Not. Dicot. 265. t. 477).

HAB. Ava, Irrawaddi valley at Katha, in savannahs (Griff.).—Fl. May.

8. H. WALLICHII, Kurz in Journ. As. Soc. Beng. 1876. 136.

HAB. Not unfrequent in the eng- and hill-eng-forests from Martaban down to Tenasserim.—Fl. Fr. Octob.

9. H. SPERGULACEA, (*Oldenlandia spergulacea*, DC. Prod. IV. 428; *Oldenlandia ovalifolia*, Miq. Fl. Ind. Bat. II. 192, non DC.; *H. scapigera*, R. Br. in Wall. Cat. 881; *H. nudicaulis*, WA. Prod. I. 416; Bedd. Icon. t. 33).

HAB. Not unfrequent on rocky ground in the leaf-shedding forests, especially in the dry, eng-, and upper mixed ones, from Prome, Pegu, and Martaban down to Upper Tenasserim.—Fl. Fr. Sept.—Decb.

10. H. PANICULATA, (*Oldenlandia paniculata*, L. sp. pl. 1667; Roxb. Fl. Ind. I. 422; Bth. Fl. Hongk. 152; DC. Prod. IV. 427; *H. racemosa*, Lamk. Dict. III. 76 and Ill. t. 62. f. 2; Wight Icon. t. 312; *Oldenlandia alata*, Roxb. Fl. Ind. I. 421, non Kœn.).

HAB. Frequent in rubbishy places, in garden and other cultivated land, along river-banks, &c., all over Burma.—Fl. Fr. Jan.—June.

11. H. ANDAMANICA, Kurz in Journ. As. Soc. Beng. 1872. 311.

HAB. On moist sandstone rocks along choungs in the forests of the Andamans.—Fl. Fr. May, June.

A branched variety of this has the capsules more compressed and more keel-winged and the calyx-teeth still larger. As a species it is allied to *H. lanceæfolia*, Dalz., and *H. alata*, L.

12. H. CAPITELLATA, R.Br. in Wall. Cat. 837; Walp. Rep. II. 494.

Var. α. GENUINA, (*Oldenlandia rubioides*, Miq. Fl. Ind. Bat. II. 353), all parts quite glabrous.

Var. β. SUBPUBESCENS, stems glabrous, the branchlets and the undersurface of the leaves minutely pubescent.

Var. γ. PUBESCENS, all parts densely pubescent, the leaves above roughish minutely, beneath softly and yellowish but shortly, pubescent; calyx-teeth often longer and larger.

HAB. Var. α. and β. from Martaban down to Tenasserim; also Ava, Kakhyen hills; var. γ. not unfrequent in the hill-toungyas, and along choungs in the tropical forests of the Martaban and Tenasserim hills, up to 3000 ft. elevation.—Fl. Decb.—Febr.; Fr. Febr.

This species has been identified with *H. fruticosa* of Linne, but the Ceylon plant of this name is certainly distinct.

13. H. SCANDENS, Roxb. Fl. Ind. I. 364; DC. Prod. IV. 422.

HAB. Chittagong (Hf. and Th.); Ava, Kakhyen hills (J. Anderson). —Fl. Decb.; Fr. Jan.—March.

14. H. ELEGANS, Wall. Cat. 887.

HAB. Not unfrequent in the drier hill-forests, especially the pine-forests, of the Martaban hills east of Tounghoo, at 4000—5000 ft. elevation; also Tenasserim, Tavoy (Wall.; Helf.).

N. B. Bentham (Fl. Hongk. 149) mentions doubtfully *H. loganioides*, Bth., as growing about Moulmein; possibly this species is meant? *H. loganioides*, with long calyx-lobes, occurs on Mt. Ophir near Malacca.

15. H. ULMIFOLIA, Wall. in Roxb. Fl. Ind. ed. Wall. I. 370; DC. Prod. IV. 421; (*H. lineata*, Don. Prod. Fl. Nep. 134).

HAB. In the drier hill-forests, especially in the pine-forests, of the Martaban hills east of Tounghoo, at 4000 to 6000 ft. elevation.—Fr. March.

16. H. GLABRA, Wall. Cat. 848; Miq. Fl. Ind. Bat. II. 133. (*Spermacoce glabra*, Roxb. Fl. Ind. I. 368).

HAB. Tenasserim (Helf. 2885).

17. H. COSTATA, (*Spermacoce costata*, Roxb. Fl. Ind. I. 370; *H. cœrulea*, Korth. in Ned. Kruidk. Arch. II. 160, non L. nec. WA.; *H. capituliflora*, Miq. Fl. Ind. Bat. II. 183; *Metabolos cœruleus*, Bl. Bydr. 992; DC. Prod. IT. 435).

HAB. In tropical forests, more especially along choungs and in shrubbery, of the southern parts of the Pegu Yomah above Rangoon; more frequent in Tenasserim.—Fr. Sept.

18. H. AURICULARIA, L. sp. pl. 147; DC. Prod. IV. 420; Bedd. Icon. t. 27. (*H. venosa*, Korth. in Ned. Kruidk. Arch. II. 160; Miq. Fl. Ind. Bat. II. 182; *Metabolos venosus*, Bl. Bydr. 991; *H. iodoneura*, Miq. l. c. 181; *H. lineata*, Roxb. Fl. Ind. I. 369, non Don).

Hab. Ava hills east of Bhamo (J. Anderson).—Fr. Octob.

19. H. scabra, Wall. Cat. 880.

Hab. Not unfrequent in the tropical forests from Martaban down to Upper Tenasserim.—Fl. Fr. April; Aug.

Doubtful Species.

1. *H. argentea*, Wall. Cat. 858; Walp. Rep. II. 502.

Hab. Ava, banks of the Irrawadi.

2. *H. Merguensis*, Hf. in Bth. and Hf. Gen. Pl. II. 57.

Hab. Tenasserim, Mergui (Griff.).

Scleromitrion, WA.

Conspectus of Species.

Subg. 1. *Eu-Scleromitrion.* (*Fergusonia*, Hf.?) Capsule loculicidally separating into 2 many-seeded cocci. Calyx more or less obovoid, crowned by the converging calyx-limb. Stigmatic lobes 2. Diffuse perennials.

* *Flowers in terminal sessile heads or clusters.*

Flower-heads half-included in the embracing bases of the involucre-like uppermost leaves; calyx-teeth large, ... *S. coronarium.*

* * *Flowers in axillary clusters or heads.*

× All parts glabrous or nearly so.

Leaves linear, not nerved, quite glabrous; flowers in dense clusters; calyx-tube glabrous or nearly so; capsule glabrous or shortly hispid, ... *S. rigidum.*

Leaves ovate to ovate-oblong; flowers by 2—3 or few in the leaf-axils; capsule glabrous, ... *S. nitidum.*

× × All parts, more especially the stems and capsule, more or less shortly hispid.

All parts, also the leaves, shortly scabrous-pubescent; capsule ovoid, about a line long or longer, ... *S. hispidum.*

Stem shortly hispid; leaves glabrous above, minutely puberulous beneath; corolla half the size, pubescent at the throat; capsule globular (like in *Oldenlandia*), with short calyx-lobes, ... *S. paradoxum.*

Subg. 2. *Tetragyneia*, Miq. (*Allœophania*, Thw.). Capsule separating into 2 cocci which again separate into twos. Stigmas or stigmatic lobes 4.

Stigmas capitate; leaves not rugose, sparingly hirsute above, ... *S. decipiens.*

Stigmas linear, almost spreading; leaves rugose, above glabrous or nearly so, *S. rugosum.*

1. S. coronarium, (*Hedyotis coronaria*, Wall. Cat. 856).

Hab. Tenasserim, Attaran (Brandis); Tavoy (Wall.)—Fl. Oct.

2. S. tetrandrum, (*Rondeletia tetrandra*, Roxb. Fl. Ind. I. 524; *Hedyotis macrophylla*, Wall. Cat. 841; Miq. l. c. 178; *Hedyotis nodiflora*, Wall. Cat. 855; Don. Gen. Syst. III. 526).

Hab. All over Tenasserim.—Fr. Febr.

3. S. rigidum, (*Hedyotis rigida*, Miq. Fl. Ind. Bat. II. 181; *Metabolos rigidus*, Bl. Bydr. 992).

Hab. Tenasserim.—Fr. Febr.

4. S. NITIDUM, (*Hedyotis nitida*, WA. Prod. I. 412).

HAB. Not unfrequent in the eng-forests of Pegu and in those of Martaban east of Tounghoo.—Fr. CS.

Very probably only an extreme, broad-leaved form of *S. hispidum*, while *S. approximatum* (*Hedyotis approximate*, WA. ; *Spermacoce tubularis*, R. Br. ?) may be an extreme, narrow-leaved variety of it.

5. S. HISPIDUM, (*Hedyotis hispida*, Retz. Obs. Bot. IV. 23 ; Roxb. Fl. Ind I. 364 ; DC. Prod. IV. 420 ; *Hedyotis* sp. Griff. Not. Dicot. 265 ; *Spermacoce* sp. Griff. l. c. 272).

HAB. Frequent along choungs in the moister upper mixed and the tropical forests, from Ava and Martaban to Pegu.—Fr. Jan.

6. S. PARADOXUM, (*Hedyotis paradoxa*, Kurz in Journ. As. Soc. Beng. 1876. 135).

HAB. Common in the moister upper mixed forests of the Andamans. —Fl. Fr. Jan.—March.

NB. *Allæophania decipiens*, Thw., is in my eyes a very near ally to *Scleromitrium rugosum* (*Hedyotis rugosa*, Korth.).

Spermacoce, L.

Conspectus of Species.

Flowers in dense whorl-like clusters or heads, white, about a line long ; capsules 1 lin. long, ... *S. stricta.*
Flowers 2—3 lin. long, blue, few- clustered ; capsule about 2 lin, long, ... *S. hispida.*

1. S. STRICTA, L. f. Suppl. 120 ; Roxb. Fl. Ind. ed. Wall. I. 376 ; DC. Prod. IV. 554 ; Miq. Fl. Ind. Bat. II. 331 ; Bth. Fl. Hongk. 162.

HAB. Frequent in the dry and open forests all over Ava and Pegu down to Upper Tenasserim.—Fl. RS. ; Fr. CS.

2. S. HISPIDA, L. Mant. 558 ; Roxb. Fl. Ind. ed. Wall. II. 379 ; WA. Prod. I. 438 ; Miq. Fl. Ind. Bat. II. 332. (*S. scabra*, Willd. sp. pl. I. 572 ; Roxb. Fl. Ind. l. c. 377).

Var. *α.* HISPIDA, whole plant hispid-pubescent, the leaves usually of a softer texture and undulate ; corolla-tube only 1½-2 lin. long ; capsule greyish or whitish villous ; seeds opaque, black.

? Var. *β.* ARTICULARIS, (*S. articularis*, L. f. Suppl. 119 ; Roxb. l. c. 378 ; Miq. l. c. 332 ; *S. Avana*, R. Br. in Wall. Cat. 828 ; G. Don. Gen. Syst. III. 621 ; *S. longicaulis*, R. Br. in Wall. Cat. 826 ; G. Don. Gen. Syst. III. 621), whole plant more scabrous, and short pubescent, the leaves rigid and not undulate ; corolla-tube about 3 lin. long, slender ; capsule shorter and hispid ; seeds often glossy, black or brownish.

HAB. Var. *β.* only, frequent in agrarian land and on stony sterile grounds in the leaf-shedding forests, from Ava and Martaban down to Tenasserim, up to 1500 ft. elevation.—Fl. Fr. D. S.

Knoxia, L.

Conspectus of Species.

* *Stem leafy, without radical leaves, more or less branched.*

Leaves petioled; flowers spiked, forming corymbs, ... *K. corymbosa.*

Leaves sessile or nearly so; flowers corymbose, forming corymbs, ... *K. microcarpa.*

* * *Leaves all crowded at the base; stem scape-like, with narrow small cauline leaves only.*

More or less hairy while young; calyx-tube densely villous; corolla nearly ½ an inch long, ... *K. plantaginea.*

1. K. CORYMBOSA, Willd. sp. pl. I. 582; WA. Prod. I. 439; Wight Illust. t. 128; Miq. Fl. Ind. Bat. II. 330. (*Spermacoce teres*, Roxb. Fl. Ind. ed. Wall. I. 373; *Spermacoce Sumatrensis*, Retz. Obs. IV. 23, non Roxb.).

HAB. Not unfrequent in the dry and eng-forests of Ava, and Prome, and also in Martaban east of Tounghoo.—Fl. March, April.

2. K. MICROCARPA, Kurz MS.

HAB. Not unfrequent in the eng and low forests of Pegu, especially the Irrawaddi zone; also in Martaban, as Yoonzeleen (Brandis); Zwa-Kabin (Parish).—Fl. Octob., Nov.; Fr. Dec., Jan.

There are specimens with a short wide corolla-tube and others with a slender tube nearly twice the length.

3. K. PLANTAGINEA, Wall. Pl. As. Rar. I. t. 32; Miq. Fl. Ind. Bat. II. 330.

HAB. In the dry and eng-forests of Prome as far south as Myodweng, but everywhere rare and sporadic.—Fl. Sept., Octob.; Fr. Octob.—Jan.

Cephalanthus, L.

1. C. NAUCLEOIDES, DC. Prod. IV. 539.—(*Nauclea tetrandra*, Roxb. Fl. Ind. ed. Wall. II. 125).

HAB. Burma, probably Ava hills (Griff.).

Pæderia, L.

Conspectus of Species.

* *Ripe seeds not winged. Capsule globular.*

Glabrous or pubescent; corolla scurfy-tomentose or velvety outside, ... *P. tomentosa.*

* * *Ripe seeds broadly winged. Capsule more or less compressed.*

× Corolla mealy or scurfy-tomentose or velvety outside.

Quite glabrous; calyx-lobes shorter than the calyx-tube; seed-wings pale-coloured, ..*P. foetida.*

Sparingly and shortly puberulous; calyx-lobes longer than the tube; seed-wings blackish, ... *P. calycina.*

× × Corolla not tomentose, but only sparingly and shortly pilose.

All softer parts, and more especially the undersurface of the leaves, villous-tomentose; seed-wings corky, pale-coloured, ... *P. lanuginosa.*

1. P. TOMENTOSA, Bl. Bydr. 968; Miq. Fl. Ind. Bat. II. 258, and Ann. Mus. Lugd. Bat. IV. 254. (*P. barbulata*, Miq. in Ann. Mus. L. B. IV. 255; *P. densiflora*, Miq. Fl. Ind. Bat. II. 259; *P. foetida*, Bth. Fl. Hongk. 162 ?).

Var. *α.* TOMENTOSA, all parts more or less shortly pubescent or almost scurfy-pubescent.

Var. *β.* GLABRA, all parts glabrous or only sparingly and minutely pubescent on the nerves.

HAB. Arracan hills.—Fl. Fr. Octob.

2. P. FŒTIDA, L. Mant. 52; Roxb. Fl. Ind. ed. Wall. II. 517; WA. Prod. I. 424; Miq. Fl. Ind. Bat. II. 258. (*P. ovata*, Miq. in Ann. Mus. Lugd. Bat. IV. 255).

Var. *β.* MICROCARPA, capsule compressed ovoid-orbicular, only about 3 lin. long.

HAB. Not unfrequent in shrubbery, from Chittagong and Ava down to Upper Tenasserim; Var. *β.* on Taong dong in Ava (Wall.)—Fr. Nov. —Jan.

3. P. CALYCINA, Kurz in Journ. As. Soc. Beng. 1873. 74.

HAB. Tenasserim, Tavoy (Wall. Cat. 6247. E).—Fr. Nov.

4. P. LANUGINOSA, Wall. Pl. As. rar. II. 52. t. 165; Miq. Fl. Ind. Bat. II. 259. (*P. macrocarpa*, Wall. Cat. 7292; Don Gen. Syst. IV. 561).

HAB. Frequent in the mixed forests, especially along choungs, all over Burma from Ava and Martaban down to Tenasserim; also freely springing up in the upper toungyas.—Fl. Jan.—July; Fr. Jan.—March.

Lasianthus, Jack.

Conspectus of Species.

* *Flowers in clusters or short peduncled cymes, the bracts very minute and usually deciduous.*

Flowers sessile; calyx glabrous, the lobes about as long as the tube; drupes crowded by the linear-lanceolate calyx-teeth, ... *L. lucidus.*

Flowers very shortly pedicelled or almost sessile; calyx puberulous, the limb broad with very short teeth; drupes crowned with the cyathiform contracted almost truncate calyx-limb, ... *L. constrictus.*

* * *Flowers in densely bracted sessile clusters, the bracts more or less conspicuous and often persistent.*

× Calyx-segments about a line long or shorter. Stipules small.

Leaves shortly petioled, puberulous beneath; outer bracts broad and blunt, but short; calyx-lobes lanceolate, ... *L. stercorarius.*

Sparingly stiff-hairy; leaves almost sessile, oblique; bracts all linear-subulate, hirsute, ... *L. Wallichii.*

× × Calyx-segments linear to linear-subulate, 3—5 lin. long, hirsute.

\+ Stipules very large and leafy, oval.

Leaves glabrous or nearly so ; stipules persistent, involucrating the flower heads, ..*L. stipularis.*

+ + Stipules more or less lanceolate, small, not leafy.

All parts brown-hirsute ; outer bracts very large, leafy, ovate, acuminate, *L. cyanocarpa.*

1. L. LUCIDUS, Bl. Bydr. 997 ; Miq. Fl. Ind. Bat. II. 319.

HAB. Upper Tenasserim (Falconer).—Fl. Febr.

2. L. CONSTRICTUS, Wight in Maclell. Calc. Journ. VI. 515 ; Walp. Ann. II. 762. (*L. pauciflora*, Wight l. c. ? ; *Mephitidea* sp. Griff. Not. Dicot. 267. t. 474. f. 4).

HAB. Common in the tropical forests of the Andamans ; Tenasserim, from Thoungyeen (Brandis) to Mergui (Griff.).—Fl. Fr. April—June.

Habit of *L. stercorarius*, but differs in the inflorescence and in the shape of the calyx-limb.

3. L. STERCORARIUS, Bl. Bydr. 1000 ; Miq. Fl. Ind. Bat. II. 324 and Annal. Mus. Lugd. Bat. IV. 248.

HAB. Frequent in the tropical forests of Upper Tenasserim and the Andamans.—Fl. March, April.

4. L. WALLICHII, Wight in Maclell. Calc. Journ. VI. 503. (*Mephitidea Wallichii*, WA. Prod. I. 390 ; Walp. Ann. II. 760 ; *Nonatelia ? hispida*, Wall. in Roxb. Fl. Ind. II. 187).

HAB. Not unfrequent in the tropical forests of Martaban and Upper Tenasserim ; also on the Andamans.—Fl. April, May ; Fr. March.

5. L. STIPULARIS, Bl. Bydr. 997 ; Miq. Fl. Ind. Bat. II. 319 and Ann. Mus. Lugd. Bat. IV. 246.

HAB. Tenasserim (or Andamans) (Helf. 2937).

6. L. CYANOCARPUS, Jack in Linn. Trans. XIV. 125 ; Miq. Fl. Ind. Bat. II. 316, non Bl.—(*L. bracteatus*, Wight in Maclell. Calc. Journ. VI. 501 ; *Triosteum hirsutum*, Roxb. Fl. Ind. ed. Wall. II. 180 ; *L. Roxburghii*, Wight l. c. 502).

HAB. Chittagong (Roxb.) ; rather frequent in the tropical forests of South Andaman.—Fl. May, June.

Cephaëlis, L.

1. C. HERBACEA, Roxb. Fl. Ind. I. 533. (*Psychotria herbacea*, L. sp. pl. 245 ; *Geophila reniformis*, Don. Prod. Nep. 136 ; Wight Icon. t. 54 ; Miq. Fl. Ind. Bat. II. 311).

HAB. Rather frequent in tropical forests, especially in the shade of bamboo, from Martaban and the southern spurs of the Pegu Yomah down to Tenasserim and the Andamans.—Fl. June, July ; F. Oct.—Dec.

Hydnophytum, Jack.

1. H. FORMICARUM, Jack in Linn. Trans. XIV. 124 ; Miq. Fl. Ind. Bat. II. 309.

Hab. Frequent on trees in the mangrove swamps of the Andamans. —Fl. Fr. May, June.

Psychotria, L.

Conspectus of Species.

Subg. 1. *Leucopyrenos.* Seeds plano-convex without ribs or dorsal keel, enclosed in a white thin membranous pyrene.

Small decumbent under-shrub, the stems and often also the nerves beneath shortly tomentose, ... *P. calocarpa.*

Subg. 2. *Eu-Psychotria.* Pyrenes hard, with a more or less distinct dorsal rib, or ribbed and furrowed.

* *Pyrenes not ribbed and furrowed, but dorsally more or less distinctly keeled or trigonous.*

× Pyrenes plane-convex, with an obsolete longitudinal dorsal rib. Albumen spuriously ruminate.

Glabrous; panicles elongate and raceme-like, ... *P. connata.*

As preceding; leaves larger; panicle thyrsoid or corymb-like; berries obovoid, .. *P. platyneura.*

× × Pyrenes 3-gonous, the inner face flat, the 2 lateral ones more or less concave and meeting in a longitudinal ridge.

\+ Quite glabrous.

Habit of *P. connata;* cymes small, in slightly puberulous peduncled panicles; calyx about a lin. across, obsoletely 5-toothed; albumen equable, ... *P. symplocifolia.*

\+ + Tawny or rusty hairy. Flowers sessile, clustered or in heads.

Flower-heads very small; leaves glabrous above, ... *P. polyneura.*

Flower-heads rather large, compact; leaves hirsute on both sides; albumen equable, .. *P. Helferiana.*

* * *Pyrenes longitudinally ribbed and furrowed (ribs usually 3—5.)*

× Flowers clustered or in heads.

Leaves opaque; cyme compact, somewhat tomentose; bracts subulate; albumen ruminate, ... *P. monticola.*

Leaves glossy; panicle thyrsoid, glabrous, the branchings whorled; bracts broadly ovate, ... *P. adenophylla.*

× × Flowers pedicelled, in lax cymes or corymbs.

\+ Small erect shrubs.

× Leaves thick membranous or pergamentaceous, turning more or less brownish in drying.

† Drupe 4—5 lin. long.

Glabrous; cymes rusty-puberulous; albumen ruminate, ... *P. viridiflora.*

† † Drupe only 2—3 lin. long. Albumen ruminate.

Cymes rusty puberulous on a peduncle 1—½ in. long; calyx-teeth distinct, linear; berries crowned by the calyx-lobes, ... *P. Asiatica.*

Cymes rusty puberulous, almost sessile; calyx almost truncate; berries truncate-crowned, ... *P. Andamanica.*

Cymes glabrous; leaves narrower, ... *P. divergens.*

× × Leaves thin membranous, remaining green in drying.

All parts glabrous, ... *P. viridissima.*

\+ + Large scandent shrubs. Albumen equable.

Corymbs furnished at the lower branchings with 2 opposite narrow floral leaves,
.. *P. sarmentosa.*

1. P. CALOCARPA, Kurz in Journ. As. Soc. Beng. 1872. 315.

HAB. Frequent in the tropical forests of Pegu and Martaban down to Upper Tenasserim ; Ava, Kakhyen hills (J. Anderson).—Fl. Aug.—Febr. Fr. Jan.—March.

2. P. CONNATA, Wall. in Roxb. Fl. Ind. II. 163 ; WA. Prod. I. 433. (*Grumilea elongata*, Wight Icon. t. 1036 ; *Pæderia erecta*, Roxb. Fl. Ind. I. 685).

HAB. Frequent in the moister upper mixed and in the tropical forests of the Pegu Yomah and Tenasserim down to the Andamans.—Fl. April, May ; Fr. CS.

3. P. PLATYNEURA, Kurz in Trim. Journ. Bot. 1875. 327.

HAB. Frequent in the tropical forests of the Andaman islands.—Fl. May, June.

Much resembling *P. robusta*, Bl., from which it differs in the stipules, glabrous inflorescence, and glabrous corolla.

4. P. SYMPLOCIFOLIA, Kurz For. Fl. II. 11.

HAB. In the drier hill-forests of the Martaban hills east of Tounghoo, not rare at 5000 to 7000 ft. elevation.—Fl. Fr. March.

5. P. POLYNEURA, Kurz in Trim. Journ. Bot. 1875. 327.

HAB. Not unfrequent in the tropical forests of the South Andaman. —Fl. May.

6. P. HELFERIANA, Kurz in Journ. As. Soc. Beng. 1872. 314.

HAB. Tenasserim—or Andamans ?—(Helf. 3038).

7. P. MONTICOLA, Kurz in Journ. As. Soc. Beng. 1872. 315.

HAB. Frequent in the moister hill-forests of Martaban and Upper Tenasserim, at 3500 to 6000 ft. elevation.—Fl. Fr. March, April.

8. P. ADENOPHYLLA, Wall. in Roxb. Fl. Ind. II. 166.

HAB. Tenasserim—or Andamans ?—(Helf. 3037).

Wallich describes his plant as having racemes of the thickness of the little finger ; my plant agrees with his herbarium-specimens and belongs in the vicinity of *Grumilea Gardneri*, Thw., a very near ally to *Psych. leucocoma*, Teysm. and Binn. in Tydsch. Nat. Ver. Ned. Ind.

9. P. VIRIDIFLORA, Reinw. ap. Bl. Bydr. 963 ; DC. Prod. IV. 521 ; Miq. Ann. Mus. Lugd. Bat. IV. 207. (*Grumilea viridiflora*, Miq. Fl. Ind. Bat. II. 298).

Var. *α.* GENUINA, stipules broad and rather large ; leaves entire ; cymes puberulous ; calyx-teeth inconspicuous.

Var. *β.* UNDULATA, as preceding, but leaves undulate, the calyx-teeth about ½ lin. long.

? Var. γ. CALOPHYLLA, (*P. calophylla*, Wall. and Griff. MS.), stipules small and subulate ; cymes glabrous ; calyx-teeth about ½ lin. long.

HAB. Var. β. Chittagong (Hf. and Th.).

P. picta, Wall. Cat. 8353. B. from Tavoy, Tenasserim, seems to belong to var. γ., but the specimens are too imperfect for identification.

10. P. ANDAMANICA, Kurz in Trim. Journ. Bot. 1875. 328.

HAB. Frequent in the tropical forests of the Andamans.—Fl. Fr. April, May.

11. P. DIVERGENS, Bl. Bydr. 959 ; DC. Prod. IV. 320 ; Miq. Ann. Mus. Lugd. Bat. IV. 206. (*Grumilea divergens*, Miq. Fl. Ind. Bat. II. 299).

HAB. Not unfrequent in the tropical forests of Martaban and Tenasserim, very rare in those of the eastern slopes of the Pegu Yomah.—Fl. May—June ; Fr. Febr., March.

This may possibly be a form only of *P. Asiatica*.

12. P. VIRIDISSIMA, Kurz in Journ. As. Soc. Beng. 1872. 315.

HAB. Rather rare in the tropical forests of Martaban east of Tounghoo and in Tenasserim (Helf. 3048).

13. P. SARMENTOSA, Bl. Bydr. 964 ; DC. Prod. IV. 522 ; Miq. Fl. Ind. Bat. II. 286 and Ann. Mus. Lugd. Bat. IV. 206 ; Wight Icon. t. 1038.

HAB. Tenasserim, Amherst (Falconer).—Fl. April.

Chasalia, Comm.

1. CH. CURVIFLORA, Thw. Ceyl. Pl. 150 ; Miq. Ann. Mus. Lugd. Bat. IV. 202.—(*Psychotria curviflora*, Wall. in Roxb. Fl. Ind. II. 167 ; *Psychotria ophioxyloides*, Wall. l. c. 168 ; *Ch. lurida*, Miq. Fl. Ind. Bat. II. 282 ? ; *Psychotria ambigua*, WA. ; Wight Illustr. II. t. 127).

HAB. Not unfrequent in the tropical forests from Martaban down to Tenasserim and the Andamans.—Fl. April, May.

Saprosma, Bl.

Conspectus of Species.

* *Flowers sessile, terminal.*

Flowers solitary ; stipules cut and fringed, ... *S. consimile.*

* * *Flowers solitary or by* 3 *or more in peduncled, axillary cymes.*

Cymes poor-flowered, long-peduncled, glabrous, axillary by 2—4 ; upper leaves usually ternary ; corolla 4-merous, ... *S. ternatum.*

1. S. CONSIMILE, Kurz For. Fl. Burm. II. 29.

HAB. Not unfrequent in the drier hill-forests, at 3000 to 5000 ft. elevation ; from the Martaban hills to Tenasserim.—Fr. Febr.

Much resembles *S. fruticosum*, Bl., but differs in the flowers and stipules.

2. S. TERNATUM, Bth. and Hf. Gen. Pl. II. 131, (*Serissa ternata*, Kurz in And. Rep. ed. 2. 40; *Pæderia ternata*, Wall. Cat. 6248; Don Gen. Syst. III 561).

Var. *α*. GENUINA, all parts quite glabrous.

? Var. *β*. PUBERULA, stipules, petioles, and nerves beneath more or less pubescent.

HAB. Var. *β*. rather frequent in the tropical forests of the Andamans —Fl. May, June.

Coffea, L.

Conspectus of Species.

* *Corolla funnel-shaped.*

All parts quite glabrous and glossy; flowers very shortly pedicelled, in axillary clusters, ... *C. Arabica.*

* * *Corolla salver-shaped.*

× Berries peduncled.

All parts quite glabrous and glossy; flowers on pedicels, ½—1 in. long usually terminal, rarely axillary, ... *C. tetrandra.*

× × Berries sessile.

Young shoots and nerves beneath sparingly pubescent; flowers sessile, terminal and axillary, ... *C. Benghalensis.*

*1. C. ARABICA, L. sp. pl. 245; Roxb. Fl. Ind. ed. Wall. II. 193; Sims. Bot. Mag. t. 1303; Wight Icon. t. 53; Miq. Fl. Ind. Bat. II. 305.

HAB. Occasionally cultivated, but nowhere on a large scale.—Fl. March—May; Fr. Nov.—Jan.

2. C. TETRANDRA, Roxb. Fl. Ind. ed. Wall. II. 193; DC. Prod. IV. 499. (*Prismatomeris tetrandra*, Hf. in Bth. and Hf. Gen. pl. II. 119).

HAB. Not unfrequent in the tropical forests of the Martaban hills and the Andamans, up to 3000 ft. elevation; also Chittagong.—Fl. March, April.

3. C. BENGALENSIS, Roxb. Fl. Ind. ed. Wall. II. 194; DC. Prod. IV. 499; WA. Prod. I. 435; Bot. Mag. t. 4917.

HAB. Tropical forests of Martaban and Tenasserim; also Chittagong.

Ixora, L.

Conspectus of Species.

Subg. 1. *Pavetta*, L. Flowers 4- or 5-merous. Style exserted to the same or nearly the same length of the tube, the stigma simple and spindle-like.

O Corolla more funnel-shaped, the tube only 3 lin. long.

\+ Flowers sessile or nearly so, in a dense head.

Glabrous, turning black in drying; habit of *I. Pavetta*. ..... *I. compactiflora.*

\+ \+ Flowers in cymes or corymbs, shortly pedicelled.

Glabrous, the corymbs puberulous and recurved; berries crowned by the calyx-lobes, .. *I. recurva.*

Glabrous, also the erect or nearly erect corymbs; berries marked by the circular scar of the fallen calyx-limb, ... *I. weberæfolia.*

O O Corolla-tube slender, $\frac{1}{2}$—$\frac{3}{4}$ in. long; flowers pedicelled.

All parts (also the corymbs) glabrous, in drying remaining green, ... *I. Pavetta.*

All parts more or less puberulous to tomentose, usually turning black in drying; corymbs short-puberulous, ... *I. tomentosa.*

All parts villous-pubescent, in drying not blackening; corymbs villous from spreading short hairs, ... *I. naucleiflora.*

Subg. 2. *Ixora.* L. Flowers 4- rarely 5-merous. Style shorter or longer exserted but never exceeding the corolla-tube by more than $\frac{1}{2}$—$\frac{2}{3}$ of its length, the stigmatic lobes usually spreading, rarely longer cohering.

§. *Eu-Ixora.* Flowers 4-merous.

* *Flowers in sessile or peduncled cymes or corymbs.*

× Corymbs trichotomous, short-peduncled or sessile and in this case consisting of 3 or more terminal peduncled cymes. Flowers and fruits conspicuously (1—2 lin.) pedicelled as in true *Pavetta.*

\+ Leaves acuminate or acute at the base, on a petiole $\frac{1}{2}$—1 in. long.

Leaves one-coloured, black in drying; flowers white; corolla-tube 4 lin. only long, .. *I. coriacea.*

Exactly as preceding, but corolla-tube nearly an inch long, ... *I. macrosiphon.*

Leaves pale-coloured beneath; flowers pale-rose; corolla-tube an inch long, *I. rosella.*

\+ \+ Leaves sessile or nearly so, the base rounded or cordate.

Tree; corymbs on a peduncle 1—$1\frac{1}{2}$ in. long, ... *I. brunnescens.*

× × Cymes or corymbs short-peduncled or sessile, the flowers sessile or shortly and stoutly pedicelled.

\+ Flowers white or rarely pale rose-coloured (never orange or scarlet), the corolla-lobes often comparatively narrower.

O Corolla puberulous or pubescent outside.

All parts more or less pubescent; cyme rather small, almost sessile; leaves pubescent, sessile, ... *I. Brunonis.*

O O Corolla glabrous, rarely the throat bearded.

† Flowers sessile. Corolla-tube $\frac{1}{2}$—$\frac{2}{3}$ in. long, the throat naked.

Shrub; leaves sessile with a rounded or cordate base; corymb glabrous, .. *I. memecylifolia.*

Shrub; leaves petioled, the base acute or obtuse; corymb glabrous, ... *I. sessiliflora.*

Tree; leaves petioled, the base acute or obtuse; cymes puberulous, ... *I. rugosula.*

† † Flowers shortly pedicelled. Corolla-tube $1\frac{1}{2}$—2 in. long, the throat bearded.

Glabrous, also the inflorescence; leaves sessile or nearly so, ... *I. Brandisiana.*

\+ \+ Flowers orange to deep scarlet, very rarely (in varieties chiefly) white or pale rose-coloured, and in this case the corolla-lobes always much broader than those of the white-flowered section.

O Calyx-teeth very short.

† Inflorescence puberulous.

Glabrous; calyx-teeth acute; corolla-lobes more or less acute, ...*I. coccinea.*

† † Inflorescence glabrous.

Glabrous; calyx-teeth blunt; corolla-tube 1—1¼ in. long, the lobes almost orbicular, .. *I. stricta.*

Glabrous; 2 of the calyx-teeth acute, the 2 others blunt; corolla-lobes acute or almost acuminate,..... *I. glaucina.*

O O Calyx-teeth 1—1½ lin. long.

Glabrous; calyx-lobes erect; flowers white, ...*I. Korthalsiana.*

* * *Corymbs panicled, the panicles thyrsoid, brachiate-trichotomous, longer or shorter peduncled.*

× Panicle thyrsoid, long-peduncled, furnished at the base or above the base of the peduncle with a pair of sessile cordate or oval floral leaves.

† Corolla-throat naked, the tube 5—6 lin. long.

Leaves thin, turning black in drying; panicle glabrous; pedicels 1—2 lin. long, .. *I. nigricans.*

Leaves membranous or chartaceous, one-coloured; pedicels 1—2 lin. long; panicle glabrous, ... *I. diversifolia.*

Leaves coriaceous, pale-coloured beneath; flowers sessile; panicle puberulous, .. *I. spectabilis.*

+ + Corolla-throat bearded.

Glabrous; corolla-tube an inch long, ... *I. barbata.*

× × Panicle longer or shorter peduncled, without floral leaves.

+ Style hairy. Panicle minutely puberulous.

Tree; all parts glabrous; flowers sessile, the corolla-tube only 2—2½ lin. long, .. *I. parviflora.*

+ + Style glabrous. Panicle pubescent.

Shrub; leaves puberulous beneath; corolla-tube 1—1¼ in. long, ... *I. villosa.*

Shrub; leaves and branchlets glabrous; corolla-tube ½ in. long,.....*I. cuneifolia.*

§ § *Pentadium*, DC. Flowers 5-merous. Panicle long-peduncled.

Leaves glabrous, membranous, ... *I Helferi.*

Leaves almost coriaceous, more or less shortly pubescent beneath, ... *I. longifolia.*

1. I. COMPACTIFLORA, Kurz in Journ. As. Soc. Beng. 1872. 315.

HAB. Upper Tenasserim, Daunat-pass on the Thounggyeen side, at 2000 ft. elevation (Dr. Brandis).—Fl. April.

Allied to *Ixora* (*Pavetta*) *involucrata*, Thw., from Ceylon.

2. I. RECURVA, (*Pœderia recurva*, Roxb. Fl. Ind. ed. Wall. II. 518; DC. Prod. IV. 471).

HAB. Chittagong, in moist situations amongst the hills (Roxb.).—Fl. HS.; Fr. Oct., Nov.

3. I. WEBERÆFOLIA, (*Pavetta weberæfolia*, Wall. Cat. 6182; Don Gen. Syst. III. 575; *Pavetta cerberæfolia*, Miq. Fl. Ind. Bat. II. 279).

HAB. Common in the coast-forests of the Andamans; Ava, Segain (Wall. Cat. 7290).—Fl. Fr. ∞.

Very near to the preceding species and some of Wallich's specimens indeed really seem to be referable to Roxburgh's *Pœderia recurva*.

4. I. PAVETTA, Roxb. Fl. Ind. ed. Wall. I. 395; Bth. Fl. Austr.

III. 414. (*Pavetta Indica*, L. sp. pl. 160; WA. Prod. I. 431; Wight Icon. t. 148).

Hab. Not unfrequent in the coast-forests of the Andamans.—Fl. May, June.

5. I. tomentosa, Roxb. Fl. Ind. ed. Wall. I. 296; Bth. Fl. Austr. III. 414. (*Pavetta tomentosa*, Sm. in Rees Cycl.; WA. Prod. I. 431; Wight Icon. t. 186; *Pavetta subvelutina*, Miq. Fl. Ind. Bat. II. 276; *Pavetta Indica*, Miq. l. c. 275, an Linné ?; *Pavetta Rothiana*, DC. Prod. IV. 491; Miq. in Ann. Mus. Lugd. Bat. IV. 195; *Pavetta montana*, Rwdt. in Bl. Bydr. 952; Miq. Ann. Mus. Lugd. Bat. IV. 195).

Var. *α.* Roxburghii, leaves, &c., more or less pubescent, especially beneath.

Var. *β.* glabrescens, leaves of a thinner texture, only sparingly and minutely puberulous, especially beneath, or quite glabrescent.

Hab. Common in all leaf-shedding forests, all over Burma, from Ava and Martaban down to Tenasserim; var. *α.* more on permeable substrata and on alluvium.—Fl. June, July; Fr. CS.

N. B. *Pavetta Brunonis*, Wall. ap. Wight Icon. t. 1065, seems to be that tomentose harsh-leaved form of the above species which is also frequent on calcareous substrata in Ava. Miquel, in his Fl. Ind. Bat., confounds *Pavetta Brunonis*, Wall. Cat. 6172, and *Ixora Brunonis*, Wall. Cat. 6163, two perfectly different species.

6. I. naucleiflora, (*Pavetta naucleiflora*, Wall. Cat. 6171; Don. Gen. Syst. III. 575; Miq. Fl. Ind. Bat. II. 278).

Hab. Tenasserim, Moulmein hills (Falconer).—Fl. Febr.

7. I. macrosiphon, Kurz in Trim. Journ. Bot. 1875. 327.

Hab. Not unfrequent in the tropical and beach-forests of the Andaman islands.—Fl. May.

8. I. rosella, Kurz in Journ. As. Soc. Beng. 1872. 317.

Hab. Frequent in the tropical forests of the Andaman islands.—Fl. May, June.

9. I. brunnescens, Kurz in Journ. As. Soc. Beng. 1872. 317.

Hab. Frequent in the coast, more especially the beach-forests of the Andaman islands.—Fr. April.

10. I. Brunonis, Wall. Cat. 6136; Don. Gen. Syst. III. 375.

Hab. Locally in the tropical forests of the eastern slopes of the Pegu Yomah, especially on the head-waters of the Khaboung stream.—Fl. April, May.

11. I. memecylifolia, Kurz in Journ. As. Soc. Beng. 1872. 316.

Hab. Upper Tenasserim, Houndrow (Dr. Brandis).—Fl. April.

The inflorescence and flowers are suspiciously like those of *I. sessiliflora*, Kz., and, despite the very different looking leaves, may only be a variety of it.

12. I. SESSILIFLORA, Kurz in Journ. As. Soc. Beng. 1872. 316.

HAB. Not unfrequent in the drier hill-forests of Martaban east of Tounghoo, at 3000 to 4000 ft. elevation.—Fl. April.

Very near to *I. subsessilis*, Wall., but differs in the sessile flowers, calyx, &c.

13. I. RUGOSULA, Wall. Cat. 6158; Kurz For. Fl. Burm. II. 25.

HAB. Rare along choungs in the tropical forests of the central parts of the Pegu Yomah; Upper Tenasserim, hot springs of the Attaran river (Wall.).—Fl. May; Fr. Febr.

14. I. BRANDISIANA, Kurz in Journ. As. Soc. Beng. 1872. 316.

HAB. Upper Tenasserim, Attaran (Dr. Brandis).—Fl. July.

*15. I. COCCINEA, L. sp. pl. 159; Roxb. Fl. Ind. ed. Wall. I. 385; WA. Prod. I. 427; Wight Icon. t. 153; Miq. Fl. Ind. Bat. II. 266. (*I. grandiflora*, R. Br. in Bot. Reg. t. 152; *I. propinqua*, R. Br. in Wall. Cat. 6119; Don. Gen. Syst. III. 570).

Var. *α.* LINNEANA, corolla-lobes ovate-lanceolate, very acute.

Var. *β.* BANDHUCA, (*I. Bandhuca*, Roxb. Fl. Ind ed. Wall. I. 386; Bot. Reg. t. 513; Wight Icon. t. 149; Miq. Fl. Ind. Bat. II. 266), corolla-lobes broadly ovate, bluntish; leaves usually all sessile, with a cordate base, blunt, mucronate.

HAB. Generally planted all over the country, but nowhere wild.—Fl. March.

16. I. STRICTA, Roxb. Fl. Ind. I. 384; DC. Prod. IV. 486; Wight Icon. t. 1307.—(*Pavetta stricta*, Miq. Fl. Ind. Bat. II. 269; *I. coccinea*, Curt. Bot. Mag. t. 169; *I. alba*, Roxb. Fl. Ind. ed. Wall. I. 389; Wight Icon. t. 707; *I. blanda*, Ker. Bot. Reg. t. 100).

Var. *α.* ROXBURGHIANA, corymbs sessile or nearly so, rarely shortly peduncled; leaves usually almost sessile and often rounded at the base.

Var. *β.* BLUMEANA, (*Pavetta Javanica*, Bl. Bydr. 949; Miq. Fl. Ind. Bat. II. 268 and Ann. Mus. Lugd. Bat. IV. 191; *I. amœna*, Wall. Cat. 6121; Miq. Fl. Ind. Bat. II. 267), corymbs more lax, on a 1—1½ in. long peduncle; leaves usually acute at the base; petiole 1—2 lin. long; flowers somewhat larger.

HAB. Both varieties in Upper Tenasserim, Moulmein, also in tropical forests above Rangoon in Pegu.—Fl. Jan.—April.

17. I. GLAUCINA, (*Pavetta glaucina*, Teysm. and Binn. in Nat. Tydsch. Ned. Ind. XXIX. 245).

HAB. Upper Tenasserim, Attaran (Falconer, Brandis).—Fl. Febr.

This differs from *I. fulgens*, Roxb., chiefly in the corolla-lobes; these are figured in Roxburgh's drawings as very acute, while Wallich's specimens of this name have them blunt. The leaves are now rather opaque, now very glossy above, and they seem to vary in shape also. *Pavetta*

Lobbii, Teysm. and Binn. (Griff. 2985), is also very near to it, but really distinct in my eyes. *Pavetta Teysmanniana*, Miq., and *Pavetta macrophylla*, Teysm. and Binn., are both the same and probably not specifically different from *Ixora congesta*, Roxb. *Ixora alba* of the Botanical Garden at Buitenzorg (not of Roxb.) appears to me to be the same as Korthals' *Pavetta calycina*, and has exactly the calyx of *I. calycina*, Thw., but otherwise the two species are entirely different. In order to avoid confusion, I suggest that the Malayan species should be called *Ixora Korthalsiana*. *Ixora jucunda*, Thw., and *Pavetta Wyckii*, Hassk., appear to me conspecific.

18. I. NIGRICANS, R. Br. in Wall. Cat. 6154; WA. Prod. I. 428; Wight Icon. t. 318. (*Pavetta nigricans*, Miq. Fl. Ind. Bat. II. 272; *I. affinis*, Wall. Cat. 6144).

Var. *α.* GENUINA, corolla-lobes acute.

Var. *β.* ERUBESCENS, (*I. erubescens*, Wall. Cat. 6143; Miq. Fl. Ind. Bat. II. 270), corolla-lobes blunt.

HAB. Var. *β.* frequent in the swamp-forests and along swampy borders of lakes, &c., from Pegu and Martaban down to Tenasserim.—Fl. March—May.

I do not think that varieties *α.* and *β.* can be retained as distinct species; both forms occur as well in Malaya as in Hindustan.

19. I. DIVERSIFOLIA, Wall. Cat. 6146; Kurz For. Fl. Burm. II. 22.

HAB. Not unfrequent in the tropical forests, especially in marshy places and on muddy banks, from Martaban down to Tenasserim.—Fl. Febr.; Fr. April, May.

Allied to *I. paludosa* (*Pavetta paludosa*, Bl. Bydr. 954; Miq. Fl. Ind. Bat. II. 271 and Ann. Mus. Lugd. Bat. IV. 198).

20. I. SPECTABILIS, Wall. Cat. 6133; Don. Gen. Syst. III. 572; Walp. Rep. II. 482.

HAB. Frequent along choungs in the tropical forests of Arracan and from Martaban down to Tenasserim.—Fl. May, June; Fr. Oct.—March.

I have not seen Wallich's specimens and identify my tree from Don's description alone.

21. I. BARBATA. Roxb. Fl. Ind. ed. Wall. I. 394; DC. Prod. IV. 487; Bot. Mag. t. 2505 and t. 4513; Wight Icon. t. 185.

HAB. Rather frequent in the tropical forests of the Andamans.—Fl. May, June.

22. I. PARVIFLORA, Vhl. Symb. III. 2. t. 52; Roxb. Fl. Ind. ed. Wall. I. 393; WA. Prod. I. 429; Hook. Bot. Misc. III. 292. suppl. t. 34; Wight Icon. t. 711; Bedd. Fl. Sylv. t. 222. (*I. decipiens*, Griff. Not. Dicot. 271 ?; *I. Pavetta*, Andr. Bot. Rep. I. t. 78).

HAB. Not unfrequent in the dry and mixed forests of the Prome District.—Fl. March.

23. I. VILLOSA, Roxb. Fl. Ind. ed. Wall. I. 392; DC. Prod. IV. 488; Wight Icon. t. 150.

HAB. Rare in the tropical forests of the eastern slopes of the Pegu Yomah (head-waters of the Khaboung stream).—Fl. May.

24. I. CUNEIFOLIA, Roxb. Fl. Ind. ed. Wall. I. 390; WA. Prod. I. 428; Bot. Reg. t. 648; Bot. Cab. t. 1215; Wight Icon. t. 1312.—(*I. oblonga*, Wall. Cat. 6147?; *Pavetta Ackeringae* Teysm. and Binn. in Natuurk. Tydsch. Ned. Ind. XXVII. 31).

Var. α. ROXBURGHII, panicle sessile or short-peduncled; leaves glabrous.

Var. β. PUBERULA (*Ix. puberula*, Wall. Cat. 6145), panicle usually longer peduncled; leaves minutely puberulous beneath.

Var. γ. PUMILA, only 1—3 ft. high, simple or nearly so; flowers often pale rose-coloured; corymbs small and short, more slender; leaves glabrous.

HAB. Frequent (var. α. and β.) in the tropical forests along the eastern slopes of the Pegu Yomah and from Martaban down to Tenasserim; var. γ. Martaban, in the eng-forests.—Fl. Febr.—April.

A very variable plant, of which some forms closely approach *I. villosa*. I identify Roxburgh's species from the Wallichian specimens thus named, which have pubescent inflorescences, while Roxburgh's drawings exhibit sessile glabrous corymbs. Var. γ. may form a distinct species, but (being a laterite plant) it shews no other differences except such reductions and modifications of growth as can be explained by the influence of the peculiar substratum on which it grows.

25. I. HELFERI, Kurz in Journ. As. Soc. Beng. 1872. 316.

HAB. Tenasserim (Helf. 3008).

The specimens before me are incomplete but very much resemble the following species.

26. I. LONGIFOLIA, Don Gen. Syst. III. 573; Walp. Rep. II. 482 (*I. macrophylla*, R. Br. in Wall. Cat. 6165, non Bl. nec alior.).

HAB. Martaban, are in the tropical forests of Toukyeghat east of Tounghoo, Fl. May or June.

Gynochthodes, Bl.

1. G. MACROPHYLLA, Kurz in Journ. As. Soc. Beng. 1872, 314, and in Trim. Journ. Bot.

HAB. Along the coasts of the Andamans.—Fl. May.

Morinda, L.

Conspectus of Species.

Subg. 1. *Morinda*, L. Corolla-limb 5- rarely 6-lobed. Stamens as many. Erect shrubs or trees.

* *Stamens exserted.*

All parts glabrous; flower-heads on short, leaf-opposed peduncles, ... *M. exserta.*

* * *Stamens included in the corolla-tube.*

× All parts more or less tomentose or pubescent.

All parts shortly and roughish pubescent; corolla glabrous, ... *M. leiantha.*

All parts (also the corolla) softly and shortly tomentose, ... *M. tomentosa.*

× × All parts (also the corolla) glabrous.

\+ Flower-heads solitary and leaf-opposed.

† Flower-heads longer or shorter peduncled.

Stipules rounded or blunt; corolla-throat hairy; berries united into a fleshy greenish white syncarp, ... *M. citrifolia.*

Stipules acute or acuminate; corolla-tube naked; berries purplish black, only few developed on the thick torus, ... *M. angustifolia.*

† † Flower-heads sessile or nearly so.

Low shrub; quite glabrous or minutely scabrous, ... *M. persicaefolia.*

† † Flower-heads in a peduncled terminal cyme.

Quite glabrous; corolla-tube only ¼ in. long, the lobes as long, ... *M. Wallichii.*

Subg. 2. *Lucinaea*, DC. Corolla-limb 4-parted. Stamens 4. Scandent shrubs.

* *Calyx truncate.*

Flower-heads peduncled, in terminal umbels; peduncles sparingly pubescent, the other parts glabrous; leaves pale-coloured and opaque beneath, the nerves not prominent, ... *M. umbellata.*

As preceding, but leaves glossy on both sides, the net-venation prominent, *M. tetrandra.*

* * *Calyx* 4-*toothed. All parts glabrous.*

Calyx sulcate; flower-heads by threes in a peduncled poor brachiate terminal cyme, .. *M. speciosa.*

1. M. LEIANTHA, Kurz in Journ. As. Soc. Beng. 1872. 313.

HAB. Tenasserim, Moulmein District (Falconer).—Fl. Febr.

2. M. TOMENTOSA, Heyne in Roth Nov. sp. 147; DC. Prod. IV. 448; WA. Prod. I. 420. (*M. multiflora*, Roxb. Fl. Ind. ed. Wall. II. 200).

HAB. Not unfrequent in the mixed dry forests of the hills in Prome District.—Fl. March.

3. M. CITRIFOLIA, L. sp. pl. 250; DC. Prod. IV. 446.; Roxb. Fl. Ind. I. 541; Miq. Fl. Ind. Bat. II. 242; Bedd. Fl. Sylv. t. 220.

Var. α. GENUINA, stipules blunt; syncarps the size of a hen's egg, or somewhat larger.

Var. β. BRACTEATA, (*M. bracteata*, Roxb. Fl. Ind. ed. Wall. II. 189; Wight Ill. t. 126), stipules often acute; syncarps much smaller.

HAB. Var. α. only planted all over Pegu and Martaban, and elsewhere; var. β. not unfrequent in the tropical forests of the Andamans. —Fl. April, May.

4. M. ANGUSTIFOLIA, Roxb. Fl. Ind. ed. Wall. II. 201 and Corom. Pl. III. t. 237; DC. Prod. IV. 447, non Roth.

HAB. Not unfrequent in the tropical forests of Martaban and Tenasserim; Ava, Khakyen hills; frequently cultivated all over the country. —Fl. March, April.

5. M. PERSICÆFOLIA, Ham. in Trans. Linn. Soc. XIII. 535; DC. Prod. IV. 447.

Var. *α.* GENUINA, all parts quite glabrous.

Var. *β.* SCABRA, all softer parts more or less rough from a minute indistinct pubescence.

HAB. Common in the savannahs from Ava and Martaban down to Upper Tenasserim; var. *β.* in the dry forests of the Prome District.—Fl. March—May; Fr. June.

6. M. WALLICHII, Kurz in Journ. As. Soc. Beng. 1872. 313.

HAB. Tenasserim (Revd. Parish, 316).

7. M. TETRANDRA, Jack Mal. Misc. II. 13; Roxb. Fl. Ind. ed. Wall. II. 201; Miq. Fl. Ind. Bat. II. 246.

HAB. Not unfrequent in the tropical forests of Martaban and Tenasserim.

8. M. SPECIOSA, Wall. Cat. 8436; Kurz For. Fl. Burm. II. 62. (*Rennellia speciosa*, Bth. and Hf. Gen. pl. II. 118).

HAB. Upper Tenasserim, Chappedong hills (Wall.).

Vangueria, Comm.

Conspectus of Species.

\+ Unarmed.

All parts glabrous; stigma mitre-shaped, ... *V. edulis.*

× × Armed with opposite sharp spines.

All parts glabrous; berries about an inch thick, ... *V. spinosa.*

All softer parts (also the corolla) pubescent; berries up to ½ inch thick, ... *V. pubescens.*

*1. V. EDULIS, Vhl. Symb. III. 36; WA. Prod. I. 421; Miq. Fl. Ind Bat. II. 249.—(*V. Commersonii*, Desf. in Jacq. Hort. Schoenb. I. t. 44).

HAB. Chittagong, planted in gardens (Wall.).

2. V. SPINOSA, Roxb. Fl. Ind. ed. Wall. II. 172; DC. Prod. IV. 454.

HAB. Not unfrequent in the mixed dry forests of the Prome District. Fl. March.

3. V. PUBESCENS, Kurz in Journ. As. Soc. Beng. 1872. 314.

HAB. Here and there in the eng and the mixed dry forests from Ava and Martaban down to Pegu.—Fl. March, April.

Plectronia, L.

(*Polyozus*, Miq., non Lour.)

Conspectus of Species.

* *Pyrenes quite smooth, triangular and almost keeled.*

Unarmed, glabrous; flowers in dichotomous elongate-branched cymes, ... *P. glabra.*

* * *Pyrenes more or less wrinkled and tubercled, rounded on the back.*

× Unarmed shrubs or trees.

All parts glabrous and glossy ; flowers cymose, ... *P. didyma.*
Branchlets and nerves of leaves pubescent ; flowers on long capillary pedicels, solitary or paired, ... *P. gracilipes.*

× × Armed with opposite (rarely ternary) sharp spines, which are usually decussately placed.

\+ Branchlets more or less rusty or tawny pubescent.

Leaves pubescent on both sides, or hispid above ; drupes the size of a pea, *P. parvifolia.*
Leaves glabrous, or the mid-rib beneath slightly pubescent ; drupes the size of a small cherry, ... *P. horrida.*

\+ + All parts perfectly glabrous.

Leaves glossy, caudate-acuminate ; flowers clustered, ... *P. angustifolia.*
Leaves more or less blunt, glaucescent beneath ; flowers in peduncled cymes, .. *P. parvifolia.*

1. P. GLABRA, Bth. and Hf. (*Canthium glabrum*, Bl. Bydr. 967 ; DC. Prod. IV. 473 ; Miq. Fl. Ind. Bat. II. 254 ; *Canthium recurvum* Wall. MS. ap. Voigt Hort. Calc. 389).

HAB. In the tropical forests of the southern spurs of the Pegu Yomah and in Tenasserim ; also Andamans.—Fl. RS. ; Fr. Jan.

2. P. DIDYMA, Bth. and Hf. (*Canthium didymum*, Gærtn. Fruct. III. 94. t. 196 ; Roxb. Fl. Ind. ed. Wall. II. 171 ; WA. Prod. I. 425 ; Bedd. Fl. Sylv. t. 221 ; *Canthium umbellatum*, Wight Icon. t. 1034 ; *Canthium spirostylum*, Miq. Ann. Mus. Lugd. Bat. IV. 251 ; *Canthium lucidulum*, Miq. l. c. 254).

HAB. Tenasserim (Helf. 2972).

Two different species may really be included in the above synonymy. *Canthium oliganthum*, Miq. and *Canthium umbelligerum*, Miq. Ann. Mus. Lugd. Bat. IV. 251, are both referable to *Canthium lucidum*, Hook. and Arn.

3. P. GRACILIPES, Kurz For. Fl. Burm. II. 36 (*Canthium gracilipes*, Kurz in Journ. As. Soc. Beng. 1872. 314).

HAB. Rather frequent in the tropical forests of the Andamans, especially along the western side.—Fr. April, May.

Much resembling *Vangueria Miqueliana* (*Pyrostria ? spinosa*, Miq. Fl. Ind. Bat. II. 313), but differs in the absence of spines, in its larger leaves, and in the different fruits.

4. P. PARVIFOLIA, Bth. and Hf. (*Canthium parvifolium*, Roxb. Fl. Ind. ed. Wall. II. 170 ; DC. Prod. IV. 474 ; *Canthium scandens*, Bl. Bydr. 966 ; Miq. Fl. Ind. Bat. II. 255).

HAB. Not unfrequent in the low forests and in cleared shrubby places of the southern parts of Pegu : Chittagong (Roxburgh).—Fl. RS.

5. P. HORRIDA, Bth. and Hf. (*Canthium horridum*, Bl. Bydr. 966 ; DC. Prod. IV. 474 ; Miq. Fl. Ind. Bat. II. 255 and Ann. Mus. Lugd. Bat. IV. 251).

HAB. Tenasserim, Tavoy (Wall. Cat. 8298. C.)

6. P. ANGUSTIFOLIA, Bth. and Hf. (*Canthium angustifolium*, Roxb. Fl. Ind. ed. Wall. II. 169; DC. Prod. IV. 479; *Canthium Leschenaultii*, WA. Prod. I. 426; Wight Icon. t. 826).

HAB. Hills of Chittagong (Roxburgh).—Fl. March—July.

I have found another small-leaved glabrous unarmed shrub in the swamp-forests of Pegu apparently belonging to this genus, but unfortunately without flower or fruit. In habit it somewhat resembles *P. parviflora*, Bth. and Hf.—*Gardenia parvifolia*, Wall. Cat. 8256 from Tavoy, of the habit of *Damnacanthus*, is sterile and, therefore, indeterminable.

Guettarda, L.

1. G. SPECIOSA, L. sp. pl. 1408; Roxb. Fl. Ind. I. 686; Wight Icon. t. 40; WA. Prod. I. 422; Bot. Reg. t. 1393.

HAB. Common in the beach-forests and generally along the sea-coasts of Tenasserim and the Andamans.—Fl. April, May.

Polyphragmon, Desf.

(*Timonius*, Rumph.)

1. P. FLAVESCENS, (*Helospora flavescens*, Jack in Linn. Trans. XIV, 127. t. 4. f. 3.; DC. Prod. IV. 394; Miq. Fl. Ind. Bat. II. 234).

Var. β. MACROCARPUM, leaves larger and of thinner texture; drupes the size of a small cherry; seeds oblong, about 2 lin. long.

HAB. Var. β. in the tropical forests of South Andaman.—Fl. April, May; Fr. March.

Var. β. may be distinct, but the species of *Polyphragmon* belonging to the immediate affinity of *P. flavescens* are difficult to understand.

Gardenia, L.

Conspectus of Species.

Subg. 1. *Eu-Gardenia.* Unarmed. Stipules more or less connate into a sort of a sheath. Flowers showy, salver-shaped, the tube long. Calyx various.

* *Flowers and berries sessile or nearly so.*

Leaves almost sessile, scabrous; berries globular, in the forks of the branchings, .. *G. obtusifolia.*

* * *Flowers (and berries) on short pedicels 3—5 lin. long.*

Leaves glabrous, with a tuft of hairs in the nerve-axils beneath; calyx-limb deeply 5-cleft; berry oblong, terete, ... *G. resinifera.*

Leaves glabrous; calyx-limb laterally cleft and more or less spathaceous; berry oblong, more or less distinctly ribbed, ... *G. coronaria.*

Subg. 2. *Campanularia.* Unarmed. Stipules connate or almost free. Corolla campanulate-funnel-shaped with a ventricose-inflated tube. Leaves glossy.

Tree; leaves coriaceous, with a gland in the nerve-axils beneath; flowers large and showy, ... *G. pulcherrima.*

Low shrub 1—3 ft. high; leaves membranous; flowers middling-sized, white, .. *G. hygrophila.*

Subg. 3. *Randioides.* *Randia*-like trees or shrubs, armed with opposite sharp spines (abortive branchlets). Stipules free, very deciduous. Flowers comparatively small.

* *All parts (also the leaves) glabrous. Calyx-lobes herbaceous or leafy.*

Leaves more or less lanceolate; flowers pedicelled, by 2 or more clustered; calyx about 2 lin. long, ... *G. campanulata.*

* * *All parts more or less pubescent, villous, or tomentose.*

× Fertile flowers sessile, hermaphrodite-sterile ones in cymes. Calyx-lobes herbaceous or leafy. Flowers green.

Bark grey; fertile and sterile flowers on the same plant; berries plumply beaked, terete, ... *G. sessiliflora.*

Bark red; fertile and sterile flowers usually on separate trees; berries slightly ribbed, .. *G. erythroclada.*

× × All flowers fertile, or at least the fruits all conform and equally well developed. Calyx truncate or minutely toothed. Flowers white or yellow.

Calyx puberulous; berry smooth; branches silvery white; leaves quite glabrous, .. *G. cuneata.*

Calyx minutely pubescent; berry roughish, glabrous; branchlets grey; leaves pubescent beneath, ... *G. turgida.*

Calyx velvety-tomentose; berry densely brown-velvety, ... *G. dasycarpa.*

1. G. OBTUSIFOLIA, Roxb. Hort. Beng. 15; Kurz For. Fl. Burm. II. 42 (*G. suavis*, Wall. Cat. 8274).

HAB. Frequent in the eng and dry forests from Prome and Martaban down to Upper Tenasserim.—Fl. March, April; Fr. the following year.

2. G. RESINIFERA, Roth Nov. spec. 150, non Korth. (*G. lucida*, Roxb. Fl. Ind. I. 707; WA. Prod. I. 395; DC. Prod. IV. 395; Wight Icon. t. 575).

HAB. Chittagong (Roxb.).

3. G. CORONARIA, Ham. in Symes Embassy Ava. 474. c. tab. (*Gard. costata*, Roxb. Fl. Ind. I. 704; DC. Prod. IV. 380; *G. carinata*, Griff. Not. Dicot. 261. t. 474. f. 3).

HAB. Frequent in the moister mixed forests, rare in the low forests of Pegu, Martaban, and Tenasserim; also Chittagong.—Fl. April; Fr. the following year.

4. G. PULCHERRIMA, Kurz in Journ. As. Soc. Beng. 1872. 312.

HAB. Not unfrequent in the tropical forests of the Andamans.—Fl. May; Fr. April of the following year.

G. ? ixorifolia, R. Br. in Wall. Cat. 8262, from Tavoy (leaves only), is near allied to the above, but apparently different.

5. G. HYGROPHILA, Kurz in Journ. As. Soc. Beng. 1872. 312.

HAB. Frequent in the swamp-forests and in swampy places in the savannahs of the Irrawaddi alluvium in Pegu and the Prome district.—Fl. Jan.

6. G. CAMPANULATA, Roxb. Fl. Ind. I. 710; DC. Prod. IV. 383; Wight Icon. t. 578.

Hab. Chittagong; in the tropical forests of Pegu above Rangoon; Upper Tenasserim, Ta-oo table-land (Dr. Brandis).

7. G. sessiliflora, Wall. Cat. 8291; Kurz in For. Fl. Burm. II. 40.

Hab. Frequent in the mixed and dry forests, especially in the lower mixed ones and in the savannahs, all over Burma, from Ava and Martaban down to Tenasserim.—Fl. April—May; Fr. CS.

8. G. erythroclada, Kurz in Journ. As. Soc. Beng. 1872. 311.

Hab. Common in the mixed and dry forests all over Burma, from Ava and Martaban down to Upper Tenasserim.—Fl. April, May; Fr. CS.

9. G. cuneata, R. Br. MS.; Kurz For. Fl. Burm. II. 41 (*Randia cuneata*, Wall. Cat. 8263).

Hab. Ava, left bank of the Irrawaddi below Ava.—Fr. Sept.

10. G. turgida, Roxb. Fl. Ind. I. 711; DC. Prod. IV. 382; Wight Icon. t. 579.

Hab. Frequent in the eng and dry forests of Prome and of the Irrawaddi zone of Pegu.—Fl. March, April; Fr. March of the following year.

11. G. dasycarpa, Kurz in Journ. As. Soc. Beng. 1872. 412 (*Gard. tomentosa*, Wall. Cat. 8264, non Bl.).

Not unfrequent in the mixed dry and the eng-forests of the Prome District; also in Upper Tenasserim.—Fl. April; Fr. the following year.

Randia, L.

Conspectus of Species.

* *Corolla almost rotate, large* (*up to nearly* $1\frac{1}{2}$ *in. across*).

Leaves glossy, glabrous; berries large, sessile or peduncled, ... *R. uliginosa.*

* * *Corolla salver-shaped, rather small* (*about* 4 *lin. in diameter or less.*)

Glabrous or sparingly hirsute; calyx glabrous or nearly so; berries glabrous or sprinkled with minute hairs, ... *R. longispina.*

More or less shortly puberulous; calyx densely pubescent or almost villous; berries tawny-velvety, ... *R. nutans.*

1. R. uliginosa, DC. Prod. IV. 386; WA. Prod. I. 398; Wight Icon. t. 397. (*Posoqueria uliginosa*, Roxb. Fl. Ind. I. 712; *Gardenia uliginosa*, Retz. Obs. II. 14; Roxb. Corom. Pl. II. t. 135).

Hab. Frequent in the savannahs and in swampy grounds all over Burma, from Ava and Martaban down to Upper Tenasserim.—Fl. April—June; Fr. CS.

This species, and likely all true species of *Randia*, exhibit the same peculiar dimorphism of the fruit as some species of section *Randioides* of *Gardenia*. But here the peduncled fruits differ only in size, while they produce perfect seeds.

2. R. longispina, DC. Prod. IV. 386; WA. Prod. I. 398. (*Posoqueria longispina*, Roxb. Fl. Ind. I. 716; *Randia sp.* Griff. Not. Dicot. 261 ?).

Hab. In the tropical forests of the southern slopes of the Pegu Yomah.—Fl. April; Fr. May—July.

3. R. NUTANS, DC. Prod. IV. 386; WA. Prod. I. 397 (*Posoqueria nutans*, Roxb. Fl. Ind. ed. Wall. II. 565).

Hab. Common in the mixed forests all over Pegu and Martaban.—Fl. April; Fr. May—July.

Doubtful Species.

1. *R. exaltata*, Griff. Not. Dicot. 262.

Hab. Tenasserim, Mergui, in low lands, with mangroves, Pullow (Griff.).—Fl. Fr. Jan.

2. *R. polysperma*, Roxb. Fl. Ind. ed. Wall. II. 147.

Hab. Chittagong.—Fl. May; Fr. Aug., Sept.

N. B. No *Randia*, but indeterminable for the present.

Webera, Schreb.

Conspectus of Species.

Subg. 1. *Eu-Webera.* Stigma entire. Erect shrubs or trees, unarmed.

* *Cymes terminal or in the forks of the branchings.*

All parts (also the inflorescence) quite glabrous, ... *W. Asiatica.*
Glabrous; inflorescence grey pubescent, ... *W. glomeriflora.*

* * *Cymes or corymbs leaf-opposed.*

All parts glabrous; cymes puberulous, ... *W. oppositifolia.*

Subg. 2. *Griffithia*, WA. Stigma 2-lobed. Shrubs, often scandent, armed with straight or recurved spines.

* *Spines recurved. Scandent shrubs.*

× Inflorescence quite glabrous.

Corolla-tube ¾—1¼ in. long, ... *W. longiflora.*
Corolla-tube hardly longer than the calyx (2 lin. long), ... *W. Siamensis.*

× × Inflorescence and calyx appressed-pubescent.

Corolla-tube about 3 lin. long, ... *W. bispinosa.*

* * *Spines straight. Erect or straggling shrubs.*

Flowers sessile or almost sessile between 2 connate bractlets, ... *W. fasciculata.*
Flowers solitary, on a slender bractless pedicel, ... *W. myrtifolia.*

1. W. GLOMERIFLORA, Kurz in Journ. As. Soc. Beng. 1872. 311.

Hab. Rare in the tropical forests of the interior parts of the Pegu Yomah (head-waters of the Toungnyo choung).—Fl. probably March or April; Fr. Febr.

The leaves are exactly like those of *Griffithia rugulosa*, Thw.

2. W. OPPOSITIFOLIA, Roxb. Fl. Ind. ed. Wall. II. 525. (*W. densiflora*, Wall. in Roxb. Fl. Ind. II. 536; *Stylocoryne densiflora*, Miq. in Ann. Mus. Lugd. Bat. IV. 128. t. 5. fig. A.; *Cupania densiflora*, DC. Prod. IV. 394; *Randia densiflora*, Bth. Fl. Hongk. 155; *Gynopachys axilliflorus*, Miq. in Fl. Ind. Bat. II. 221).

Var. α. GENUINA, calyx 2 lin. long or somewhat longer, the limb

more bell-shaped, almost glabrous; flowers in shorter cymes; berries the size of a large pea.

? Var. *β.* FLORIBUNDA, calyx about 1½ lin. long or shorter, densely pubescent, the limb shorter; flowers in densely pubescent slender divaricate corymbs; berries half the size.

HAB. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah and from Martaban to Tenasserim and the Andamans; also Chittagong; var. *β.* in the tropical forests of the Andamans, rather frequent.—Fl. April June; Fr. Oct.

3. W. LONGIFLORA, (*Randia longiflora*, Lamk. Dict. III. 26; DC. Prod. IV. 386; *Posoqueria longiflora*, Roxb. Fl. Ind. ed. Wall. II. 569; *Griffithia fragrans*, Miq. Fl. Ind. Bat. II. 208, non WA.).

HAB. Rather frequent in the tropical forests of the Andamans and Tenasserim; also Chittagong.—Fl. March—May; Fr. June, July.

This, as other species of *Griffithia*, have the cymes not strictly axillary but arising from the end of, or laterally from, the transformed spine-like branchlets.

4. W. SIAMENSIS, (*Griffithia Siamensis*, Miq. Ann. Mus. Lugd. Bat. IV. 130; *Canthium ? angulosum*, Wall. Cat. 8285. A.).

HAB. Upper Tenasserim (Wall.).—Fl. March.

5. W. BISPINOSA, (*Stylocoryne bispinosa*, Griff. Not. Dicot. 260).

HAB. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah and from Martaban down to Tenasserim.—Fl. April, May.

6. W. FASCICULATA, (*Posoqueria fasciculata*, Roxb. Fl. Ind. ed. Wall. 568; *Posoqueria rigida*, Wall. in Roxb. l. c. 570; *Randia rigida*, and *R. fasciculata*, DC. Prod. IV. 386).

HAB. Tenasserim, about Moulmein (Rev. Parish).

7. W. MYRTIFOLIA, Kurz For. Fl. Burm. II. 49 (*Gardenia myrtifolia*, Wall. Cat. 8255. D.)

HAB. Frequent in the swamp-forests of the Irrawaddi alluvium in Pegu; Tenasserim, Moulmein (Wall.).—Fl. May.

Diplospora, DC.

1. D. SINGULARIS, Korth. in Ned. Kruidk. Arch. II. 200; Miq. Fl. Ind. Bat. II. 238 and Ann. Mus. Lugd. Bat. IV. 250. (*Discospermum sphaerocarpum*, Dalz. in Hook Kew Journ. Bot. II. 257 ?)

HAB. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah and more frequent in those of Martaban, Tenasserim, and the Andamans.—Fl. April, May.

Hypobathrum, Bl.

Conspectus of Species.

Subg. 1. *Petunga*, DC. Flowers 4-merous; the calyx-limb persistent. Berry contracted into a longer or shorter stalk (the elongating pedicel).

Glabrous; flowers in axillary spikes, ... *H. racemosum.*

Subg. 2. *Hyptianthera*, WA. Flowers 5-rarely 4-merous, the calyx-limb persistent. Berry sessile.

Glabrous; flowers in axillary clusters, ... *H. strictum.*

1. H. RACEMOSUM, (*Randia racemosa*, Roxb. Fl. Ind. I. 144; *Petunga Roxburghii*, DC. Prod. IV. 399; *Petunga variabilis*, Hassk. Cat. Hort. Bog. 114; Miq. Fl. Ind. Bat. II. 201, cum syn.).

HAB. Not unfrequent in the swamp-forests and in swampy or marshy places along choungs or around lakes of Pegu and Martaban, and no doubt elsewhere.—Fl. Oct.—Dec.; Fr. Dec.—April.

2. H. STRICTUM, (*Hyptianthera stricta*, WA. Prod. I. 399; *Randia stricta*, Roxb. Fl. Ind. I. 526; *Rondeletia stricta*, Roth Nov. sp. 140).

HAB. Chittagong (Hf. and Th.); Ava, Bhamo (J. Anderson).—Fl. Sept.; Fr. Febr.

Brachytome, Hf.

1. B. WALLICHII, Hf. Icon. plant. t. 1088.

HAB. Ava (Griff. 2787); Kakhyen hills (J. Anderson).—Fl. April.

Inflorescence, flowers, and berries very like those of *Saprosma ternatum*, but the last are many-seeded.

Morindopsis, Hf.

1. M. CAPILLARIS, Kurz in Journ. As. Soc. Beng. 1874. 189 (*Psilobium capillare*, Kurz l. c. 1873. 313).

HAB. Frequent in the swamp-forests of Pegu and Martaban down to Tenasserim.—Fl. April, May.

Mussænda. L.

Conspectus of Species.

* *Calyx-limb deciduous, leaving an angular scar at the top of the berry.*

× Calyx-teeth $\frac{1}{2}$—1 lin. long.

Calyx-teeth erect, lanceolate; branchlets puberulous or velvety, ... *M. glabra.*

Calyx-teeth as in preceding but reflexed; branchlets hirsute, ... *M. variolosa.*

× × Calyx-lobes 2—4 lin. long.

Calyx-lobes filiform, 2—2$\frac{1}{2}$ lin. long, all conform and none expanded leaf-like, .. *M. pavettæfolia.*

Calyx-lobes linear, 2—3 lin. long; corolla-lobes nearly half as long as the corolla-tube, .. *M. macrophylla.*

Calyx-lobes lanceolate, about $\frac{1}{2}$ in. long; corolla-lobes about $\frac{1}{4}$ as long as the corolla-tube, ... *M. calycina.*

* * *Calyx-limb persistent, crowning the berry.*

Calyx-teeth linear-subulate, about 4 lin. long; corymbs rather compact, *M. corymbosa.*

1. M. GLABRA, Vhl. Symb. III. 38; DC. Prod. IV. 370.

Var. α. GENUINA, more glabrous, especially the leaves and branches.

Var. β. WALLICHII, (*M. Wallichii*, Don. Gen. Syst. III. 490), leaves pubescent beneath and along the nerves above, petioles shorter.

Hab. In the drier hill-forests of Martaban east of Tounghoo, at 3000 to 4000 ft. elevation.—Fl. Fr. March.

2. M. variolosa, Wall. Cat. 6259 ; Don. Gen. Syst. III. 490 ; Miq. Fl. Ind. Bat. II. 215.

Hab. Rather rare in the tropical forests of the southern parts of the Pegu Yomah, more frequent in Tenasserim from Moulmein southwards ; also Arracan, Sandoway, &c.—Fl. Sept.—Febr.

M. parva, Wall. Cat. 6261 (Don. Gen. Syst. III. 491) from Tavoy, possibly belongs here, but the only specimen seen by me is not sufficient for a correct identification.

3. M. pavettæfolia, Kurz For. Fl. Burm. II. 57.

Hab. Not unfrequent in the tropical forests of Martaban, east of Tounghoo.—Fl. June ?

The leaves much resemble those of the glabrescent form of *Ixora tomentosa.*

4. M. macrophylla, Wall. in Roxb. Fl. Ind. II. 228 ; DC. Prod. IV. 371, non Schum.

Hab. Frequent in the tropical forests of the Andamans, especially along the coasts.—Fl. May, June ; Fr. June, July.

5. M. calycina, Wnll. Cat. 6253 ; Don. Gen. Syst. 489 ; Miq. Fl. Ind. Bat. II. 214.

Hab. Not unfrequent in the mixed and mixed dry forests, from Ava and Prome to Pegu, especially along choungs.

6. M. corymbosa, Roxb. Fl. Ind. ed. Wall. II. 226 ; DC. Prod. IV. 371 ; WA. Prod. I. 393.

Hab. Not unfrequent in the upper mixed forests of the Kolodyne district in Arracan ; also Upper Tenasserim, Moulmein (Falconer).—Fr. Octob.

Acranthera, Arn.

1. A. uniflora, Kurz in Journ. As. Soc. Beng. 1872. 312. (*Mussænda uniflora*, Wall. Cat. 6264 ; Don. Gen. Syst. III. 491).

Hab. Tenasserim, Moulmein, in woods, plentiful (R. Scott) ; Tavoy (Wall.).—Fl. June ; Fr. Aug.

Adenosacme, Wall.

1. A. longifolia, Wall. Cat. 6280 A ; Miq. Fl. Ind. Bat. II. 217. (*Rondeletia longifolia*, Wall. in Roxb. Fl. Ind. II. 138).

Hab. Rare in the tropical forests of the southern and eastern slopes of the Pegu Yomah ; more frequent in those of Martaban and Tenasserim, up to 3000 ft. elevation.—Fr. Jan.—March.

In the tropical forests of the valleys of the Nattoung hills (Martaban) grows another species, apparently new, which has very short thick petioles and the uppermost leaves almost sessile; but the specimens are too bad for description.

Myrioneuron, R. Br.

Conspectus of Genera.

Glabrous; cymes compact and head-like, densely bracted, nodding; bracts subulate, rigid, ... *M. nutans.*
Branches hirsute; cymes corymb-like, trichotomous, hirsute, erect; bracts broad, membranous, hirsute, ... *M. hirsutum.*

1. M. NUTANS, R. Br. in Wall. Cat.; Kurz For. Fl. II. 55.

HAB. Chittagong-hills, Kassalong (C. B. Clarke).—Fr. CS.

2. M. HIRSUTUM, Kurz For. Fl. Burm. II. 55.

HAB. Ava, hills east of Bhamo (J. Anderson).—Fl. May.

Urophyllum, Jack and Wall.

Conspectus of Species.

* *Ovary and berry 5—6-celled. Flowers in shorter or longer simple or decompound umbelets or cymes.*

Leaves and shoots glabrous; calyx about 2 lin. across, ... *U. glabrum.*
Leaves beneath and shoots more or less pubescent; calyx a line across, .. *U. strigosum.*

* * *Ovary and berry 2-celled. Flowers in sessile clusters.*

All parts glabrous; flowers minute, ... *U. biloculare.*

1. U. GLABRUM, Jack and Wall. in Roxb. Fl. Ind. II. 184; DC. Prod. IV. 441. (*Axanthes longifolia*, Wight in Maccl. Calc. Journ. VII. and Icon. t. 1165).

HAB. Tenasserim, Mergui (*teste* Wight).

2. U. STRIGOSUM, Korth. in Ned. Kruidk. Arch. II. 194; Miq. Fl. Ind. Bat. II. 223.

HAB. Tenasserim (or Andamans?) (Helf. 2940 and 2944).

3. U. BILOCULARE, Kurz in Journ. As. Soc. Beng. 1872. 313.

HAB. Rather rare in the tropical forests of the Martaban hills east of Tounghoo.—Fr. March.

Rubia, L.

Conspectus of Species.

Leaves more or less cordate-ovate, long-petioled, 3—5-nerved, ... *R. cordifolia.*
Leaves narrow-linear, sessile, 1-nerved, ... *R. angustissima.*

1. R. CORDIFOLIA, L. Mant. 197; DC. Prod. IV. 588; WA. Prod. I. 442; Miq. Fl. Ind. Bat. II. 337. (*R. Munjista*, Roxb. Fl. Ind. ed. Wall. I. 383; *R. scandens*, Zoll. and Mor. Syst. Verz. 66; *R. purpurea*, Dene. Mém. Acad. Brux. XI; Jacq. Voy. Bot. 84. t. 92).

Var. α. GENUINA, leaves various, more or less scabrous on the upper side and on the margins and on the nerves beneath, but not pubescent.

Var. β. AFFINIS, (*Rubia affinis*, Wall. Cat. 6209), leaves scabrous above, softly but shortly pubescent beneath.

HAB. Var. β. Ava, on Taong-dong (Wall.).—Fl. Fr. Nov.

2. R. ANGUSTISSIMA, Wall. Cat. 6207; G. Don. Gen. Syst. III. 643; Walp. Rep. II. 460. (*R. charæfolia*, Wrll. Cat. 6210; G. Don. l. c.; Walp. l. c.).

HAB. Ava, Taong-dong (Wall.).—Fl. Fr. Nov.

Galium, L.

1. G. ASPERIFOLIUM, Wall. in Roxb. Fl. Ind. I. 381; DC. Prod. IV. 598; WA. Prod. I. 442.

HAB. In open grassy places along the borders of the stunted hill-forests on Nattoung, Martaban, at about 7000 ft. elevation; Ava, Khakyen hills (J. Anderson).

DIPSACEÆ.

Conspectus of Genera.

* *Flowers not in heads, cymose or whorled.*

TRIPLOSTEGIA. Cymes dichotomous and laxly panicled. Stamens 4. Stigma terminal, straight. Small herbs.

* * *Flowers in terminal rarely axillary often peduncled heads.*

DIPSACUS. Involucre-bracts usually herbaceous, the paleas of the receptacle rigid or spinescent. Corolla 4-cleft. Rigid herbs, the flower-heads large.

Dipsacus, L.

1. D. STRICTUS, Don Prod. Fl. Nep. 161; DC. Prod. IV. 646.

Var. α. GENUINA, (*D. strictus*, Don. l. c.; *D. inermis*, Wall. in Roxb. Fl. Ind. I. 367), stems more or less retrorsely hispid; leaves more or less pilose.

Var. β. MITIS, (*D. mitis*, Don Prod. Nep. 161; *D. inermis*, Coult. Dips. 23; DC. Prod. IV. 646; *D. longicaulis*, Wall. Cat. 6856), leaves on the nerves beneath and corners of the stems sparingly beset with minute prickles, otherwise glabrous or nearly so.

HAB. Martaban, plateau of the Yoonzeleen, at 2500 ft. elevation (Dr. Brandis); Ava, Taong-dong (Wall.).—Fl. March, April.

COMPOSITÆ.

Conspectus of Genera.

Subord. I. ASTERACEÆ. Florets all tubular or bilabiate, or more usually the outer ones ligulate and forming a ray. Style-branches in the female florets always filiform, those of the hermaphrodites variously shaped (in the sterile florets sometimes the style simple). Herbs, shrubs, or rarely trees; the sap usually watery, never milky.

Trib. I. Corymbiferæ, Vaill. Florets all tubular, or more usually the marginal ones ligulate and forming a ray. Style not thickened joint-like at or near the apex. Herbs, shrubs, or trees, usually aromatic.

* *Flower-heads heterogamous, radiate or discoid, the hermaphrodite or male florets tubular, and the female ones ligulate or filiform (or rarely the heads homogamous in absence of the ray-florets).*

\+ Anthers free or nearly so. Female flowers all apetalous. Flower-heads unisexual, rarely heterogamous.

Subtrib. 1. *AMBROSIEÆ.* Style of hermaphrodite florets undivided. Anthers inflexed-appendaged. Pappus none. Leaves alternate.

Xanthium. Male florets numerous, in globular heads, the involucre small, consisting of free bracts in a single row. Female florets 2 together consolidated with the involucre into a prickly burr.

\+ \+ Anthers always united into a tube. Style-branches truncate or appendaged.

× Pappus of short stiff awns or scales, or reduced to a raised border, or none at all. *(Genera with a similar or no pappus, not included here, should be sought for in the next division with capillary bristles).* Anther-cells not tailed at the base.

Subtrib. 2. *HELIANTHOIDEÆ.* Flowers either heterogamous, with the female florets more or less ligulate, the central ones tubular hermaphrodite or male, or rarely discoid, with all the florets hermaphrodite and tubular. Receptacles with chaffy scales between the florets, or rarely (in *Helenioideæ*) naked. Anthers without tails. Style branches truncate and penicillate, or appendiculate, or the style of the sterile flowers undivided. Pappus of stiff awns or of short scales or none. Achenes 3—4-gonous, terete, or more usually variously compressed. Leaves opposite or rarely alternate.

* *Receptacle paleaceous* (Helianthoideæ).

\+ Pappus consisting of numerous scales, rarely awn-shaped (or none). *(Galinsogeæ).*

Galinsoga. Flower-heads radiate. Involucral bracts in 1 or 2 series, almost equal. Scales of pappus oblong, chaffy, fringed, or the alternate ones, or all, shortly awned. Herbs, leaves opposite. Receptacle conical.

Tridax. Flower-heads radiate. Involucral bracts in 2 rows, membranous, or the outer ones herbaceous. Scales of pappus feathery-fringed. Herbs, leaves opposite. Receptacle flat or rearly so.

\+ \+ Pappus consisting of only 1—4 bristly awns, or cyathiform, or absent.

× Corolla of the fertile florets persistent on the achenes. Pappus of 1—3 awns *(Zinnieæ).*

Zinnia. Receptacle conical or cylindrical. Disk-florets fertile. Achenes (at least the inner ones) 1—3-aristate. Herbs, leaves opposite. Flower-heads solitary.

× × Corolla of all the flowers deciduous.

† Achenes more or less compressed from the top. Pappus of 2 (rarely 4) bristles, or none. *(Coreopsideæ).*

‡ Involucral bracts distinct, almost equal, the outer ones herbaceous, the inner almost conform to the scales of the receptacle.

Guizotia. Ray-florets fertile. Achenes small, almost 4-cornered, without pappus, but crowned with the densely pilose corolla-base. Flower-heads peduncled. Leaves opposite, or the upper ones alternate.

Synedrella. Ray-florets fertile. Achenes almost flat, lacerate-winged, crowned with 2—3 awns. Herbs, leaves opposite. Flower-heads sessile or peduncled.

‡ ‡ Involucral bracts in 2 rows, the inner ones membranous, often connate at the base or higher up, the outer ones small or minute.

§ Style-branches truncate, penicellate or overtopped by a short appendage.

Coreopsis. Ray-florets sterile or rarely fertile or none. Style-branches penicillate or truncate, with a short or obsolete appendage. Achenes flat, ciliate, or winged, rarely contracted at the top, nude or more usually terminated by 2 short awns. Leaves opposite or alternate, single to pinnatisect.

Dahlia. Ray-florets sterile, rarely fertile. Style-branches terminating in an elongate hairy appendage. Achenes flat, wingless, naked. Leaves opposite, pinnate.

Bidens. Ray-florets sterile, rarely fertile or none. Involucral bracts free or connate only at the base. Style-branches terminating in a short acute or shortly subulate appendage. Achenes not beaked, crowned with 2—4 stiff awns finally minutely retrorsely bearded or aculeate. Leaves opposite, simple to pinnatisect.

Cosmos. Ray-florets sterile, often rose-coloured or violet. Achenes more or less beaked. Rest as in *Bidens*. Leaves opposite, simple to pinnatisect.

Glossocardia. Ray-florets fertile, usually solitary. Achenes narrow, flat, long-ciliate, crowned with 2 stiff smooth awns recurved afterwards. Leaves alternate, pinnatisect.

§ § Style-branches terminating in a long, shortly hairy appendage.

Glossogyne. Ray-florets fertile. Achenes long, crowned with 2 or 3 stiff persistent awns. Leaves mostly radical, dissect to 3-toothed, the cauline ones few and small.

Chrysanthellum. Ray-florets fertile. Achenes naked, those of the disk compressed with the inner ones often winged, those of the ray thick. Leaves alternate, dissect.

† † Achenes all thick, or those of the ray triquetrous, those of the disk laterally compressed. Pappus cyathimorph or of 2—3 stiff chaffy or bristly awns, with or without intermediate scalelets, or none (*Verbesineæ*).

‡ Inner involucral bracts (or outer scales of the receptacle) embracing or enveloping the achenes of the fertile ray-florets. Pappus none or of minute free scales.

Enhydra. Involucre of 4 broad leafy bracts, the 2 outer larger than the 2 inner. Ray-florets in several rows, with very small ligules. Pappus none. Aquatic herbs, with simple opposite leaves. Flower-heads axillary, sessile or nearly so.

Siegesbeckia. Outer involucral bracts leafy, narrow, spreading, gland-hairy, the inner ones and the receptacle-scales enveloping the florets. Ray-florets in a single row with small ligules or almost bell-shaped. Pappus none. Herbs with opposite leaves. Flower-heads panicled.

‡ ‡ Inner involucral bracts all flat.

§ Scales of receptacle flat, very narrow, usually only few.

Eclipta. Involucral bracts in 2 or 3 rows, the outer ones ovate-oblong. Disk-florets 4-toothed. Ligules small, almost 2-seriate. Pappus none or shortly 2-awned. Style-branches obtuse and flattened. Herbs, leaves simple, opposite.

§ § Scales of receptacle concave or complicate, more or less embracing or enveloping the disk-florets.

‡ Achenes wingless, compressed or 4—5-cornered.

△ Pappus united at the base into a ring or cup. Flower-heads small or rather small.

Blainvillea. Ray-florets fertile, with small ligules. Disk-achenes crowned with 2—5 persistent awns united at the base into a cup or ring. Herbs, leaves opposite or the upper ones alternate. Flower-heads peduncled or almost sessile. Florets white.

Wedelia. Ray-florets fertile, with conspicuous spreading ligules. Disk-achenes crowned by numerous minute scales or fringes or by 1—2 short deciduous awns united at base into a cup or ring, or rarely the pappus very minute or obsolete. Herbs, leaves opposite, simple. Flower-heads peduncled or almost sessile. Florets yellow.

△ △ Pappus-scales or awns free from the base. Flower-heads usually large.

‡ ‡ Achenes of the disk laterally compressed (those of the ray sometimes dorsally compressed or 3-quetrous), ciliate or winged on the margins. Flower-heads small.

Spilanthes. Ray-florets, if present, fertile. Style-branches truncate and not appendaged. Achenes usually ciliate. Awns of pappus if present very thin. Herbs, leaves opposite. Receptacle conical.

Tithonia. Ray-florets sterile. Awns of the pappus deciduous or persistent, the intermediate scalelets persistent. Involucre-bracts striate at the base, stiff, elongate-leafy at apex. Tall herbs, leaves alternate. Flower-heads on thickened peduncles.

Helianthus. Ray-florets, if present, sterile. Awns of the pappus deciduous, often paleaceous, without intermediate scalelets. Tall herbs, leaves usually simple, opposite or alternate.

* * *Receptacle naked* (Helenioideæ).

Tagetes. Involucre-bracts oily-glandular, in a single row, united into a toothed cup. Pappus of 5—6 unequal scales or awns. Flower-heads usually radiate. Herbs, leaves opposite, pinnatisect or serrate.

Subtrib. 3. *CALENDULACEÆ.* Flower-heads usually heterogamous, the ray-florets ligulate, female or rarely neuter, the disk-florets tubular, hermaphrodite, but sterile or rarely fertile (very rarely the heads homogamous and discoid). Receptacle naked. Anthers usually with sagittate, but scarcely tailed base. Style-branches in the disk-florets more or less concrete and thickened at the base. Achenes often heteromorph and variously curved. Pappus none, or replaced by a woolly crown. Leaves alternate, or radical.

Calendula. Rays rather long, spreading. Achenes much incurved, muricate on the back, the margins sometimes dilated but not winged, those of the disk all abortive. Pappus none.

Subtrib. 4. *ANTHEMIDEÆ.* Flower-heads heterogamous, the females ligulate or filiform or without corollas, the disk-florets hermaphrodite or male, or very rarely all the florets tubular and hermaphrodite. Receptacle naked, or very rarely scaly. Anthers

tailless. Style-branches truncate or penicillate, rarely shortly appendaged. Pappus none, or reduced to a raised border or rarely of short scales. Leaves usually alternate.

* *Receptacle paleaceous. Flower-heads radiate, or rarely homogamously discoid.*

Achillea. Involucre ovoid, bell-shaped or rarely hemispherical. Achenes compressed, narrowly margined. Herbs or undershrubs, the leaves alternate.

* * *Receptacle naked, or alveolate-fibrillose.*

× Flower-heads radiate. Involucre bracts rather broad.

Chrysanthemum. Receptacle flat or convex. Achenes regularly or irregularly 5—10-ribbed. Pappus none, or rarely of very short scales or forming a cup.

× × Flower-heads heterogamous, discoid. (*Cotuleæ*).

\+ Florets of the circumference few. Achenes obovate or rounded at the top.

Artemisia. Involucre-bracts in few rows. Achenes almost terete or compressed, 2- or thinly many-ribbed or without ribs. Herbs or undershrubs, the leaves dissect to simple. Flower-heads small, in racemes or panicled racemes.

\+ \+ Florets of circumference very numerous. Achenes flat or concave at the top. Flower-heads spherical or hemispherical.

Cotula. Florets of the circumference without any or with a very short broad or conical corolla, the hermaphrodite florets 4-toothed, with a widened or thin tube. Achenes flat, obtuse or truncate. Flower-heads peduncled. Small herbs.

Myriogyne. Florets of the circumference with a 2—3-cleft corolla nearly as long as the style, the hermaphrodite florets 4-toothed. Bracts of involucre small and much shorter than the 3—4-cornered achenes. Flower-heads sessile, minute. Prostrate herbs.

Centipeda. As preceding but involucral bracts large and broad, in fruit connivent and covering the cylindrical slightly striate achenes. Prostrate herbs. Flower-heads sessile, small.

× × Pappus usually of numerous capillary soft bristles, (rarely paleaceous or none).

O Anthers tailed at the base.

Subtrib. 5. *INULOIDEÆ.* Flower-heads heterogamous, discoid or radiate, or homogamous in absence of the ray-florets. Anther-cells terminating in a basal bristle or tail. Style-branches linear, obtuse and not appendaged (or the style undivided in the sterile florets). Leaves usually alternate.

* *Female flowers if present ligulate.*

× Bristles of pappus all conform and almost equal, capillary, copious.

Inula. Flower-heads heterogamous. Involucre-bracts in many rows, narrow or leafy-appendaged. Ray-florets few, in 1 or 2 rows, disk-florets numerous. Anthers with double tails. Achenes not or 4—5-ribbed. Herbs or undershrubs.

× × Pappus unequal, the outer consisting of short bristles or more usually of minute scales, rarely no pappus at all.

\+ Pappus present (rarely absent).

Pulicaria. Flower-heads heterogamous, the ray-florets in 1 or 2 rows, yellow. Involucre broad, the bracts narrow, in few rows, the outer ones herbaceous. Achenes ribbed or not. Bristles of inner pappus in a single row, the outer pappus of very short scales more or less connate into a crown or slit cup.

Vicoa. Flower-heads heterogamous or homogamous. Involucre usually broad, the bracts narrow, in many rows. Achenes hardly ribbed. Bristles of pappus very thin, in a single row, rarely intermixed with a few minute scales.

\+ + Pappus none.

Carpesium. Flower-heads heterogamous, the female flowers tubular in numerous rows. Achenes many-ribbed, beaked. Herbs.

* * *Female flowers if present filiform.*

× Style-branches of hermaphrodites usually truncate. Flower-heads androgynous or unisexual, or homogamous Involucre-bracts usually scarious, hyaline or petaloid (*Gnaphalieæ*).

\+ Flower-heads 1-flowered. Pappus none.

Cæsulia. Flower-heads clustered, axillary, of 2 bracts only, inserted to the broad receptacle and surrounded by a leafy involucre. Aquatic herbs, the leaves simple.

\+ + Flower-heads many-flowered.

† Flower-heads androgynous, usually with more female than hermaphrodite florets, or more or less unisexual, dicœcious or monœcious, clustered or distinct. Involucre-bracts rarely petaloid.

O Hermaphrodite florets all sterile, the style usually entire or scarcely and only very shortly 2-cleft.

Antennaria. Flower-heads strictly dicœcious, in dense corymbs or rarely solitary. Bristles of pappus united at the base into a ring. Inflorescence not involucred.

Leontopodium. Flower-heads unisexual or androgynous, monœcious or incompletely dicœcious, clustered or in dense cymes. Bristles of pappus united at the base into a ring. Inflorescence involucred by the floral leaves.

Anaphalis. Flower-heads androgynous or incompletely dicœcious, in corymbs, rarely few or solitary. Bristles of pappus free from the base. Inflorescence not involucred.

O O Most or all hermaphrodite florets fertile. Style deeply 2-cleft.

Gnaphalium. Flower-heads more or less androgynous, usually small and clustered, rarely solitary, the involucral bracts scarious, often coloured. Ray-florets very numerous, disk-florets few. Bristles of pappus not feathery, free or united at the base into a ring.

† † Flower-heads androgynous with usually fewer female than hermaphrodite florets, or homogamous with the florets all hermaphrodite. Involucre-bracts usually scarious.

Helichrysum. Flower-heads in corymbs, or rarely solitary, the involucral bracts almost all or the inner ones or their laminæ opaquely scarious or petal-like. Achenes not beaked. Bristles of pappus smooth, rough or minutely bearded, rarely feathery towards the end.

× × Style-branches of hermaphrodite flowers not truncate, filiform. Flower-heads androgynous.

\+ Female florets supported or enveloped by the scales of the receptacle or by the involucre-bracts.

Athroisma. Flower-heads in dense terminal solitary clusters or short spikes. Female florets subtended by the scales of the receptacle. Achenes broad, dorsally compressed, ciliate on the margins. Scales of pappus very short, united into a ciliate-fringed ring. Herbs, the leaves pinnatisect.

+ + Receptacle naked. Involucral bracts herbaceous, or scarious, linear.

† Flower-heads small, packed into dense globose or ovoid clusters.

Sphæranthus. Flower-heads in solitary terminal globular clusters. Pappus none. Anthers without tails or points at the base.

Pterocaulon. Flower-heads sessile, in spiked clusters or rarely solitary. Pappus of capillary bristles. Anthers with short tails or points at the base.

† † Flower-heads separate, solitary, corymbose or panicled, rarely clustered.

O Pappus of a few rigid bristles or scales, or none.

Epaltes. Involucre-bracts rigid. Anthers with simple tails. Pappus of the female florets none, of the sterile disk-florets small.

O O Pappus consisting of copious capillary soft bristles or hairs.

Blumea. Flower-heads racemose, spiked or panicled. Style of the disk-florets all 2-cleft. Involucre bracts narrow-linear, herbaceous or thin scarious. Herbs, rarely shrubs.

Pluchea. Flower-heads corymbose. Some or all of the disk-florets sterile, with a simple style. Involucral bracts rigid, often broad. Shrubs or undershrubs.

O O Anther-base obtuse, or only mucronate or acute, but not tailed.

Subtrib. 6. *ASTEROIDEÆ.* Flower-head heterogamous radiate or discoid or homogamous in absence of the ray-florets. Involucre-bracts in several or rarely only 2 rows. Anthers with obtuse almost entire base. Style-branches linear, more or less flattened, produced beyond the stigmatic lines into lips or appendages, papillose on the outside. Receptacle usually naked. Leaves usually alternate.

* *Female florets if present filiform or bell-shaped or 2-toothed.*

× Female florets if present filiform. Pappus bristly (*Conyzeæ*).

Microglossa. Female florets in 1 or several rows with the corollas minutely ligulate, those on the disk fertile. Pappus bristles elongate. Involucre-bracts in many rows. Shrubs.

Conyza. Female florets in many rows with the corollas shortly filiform (rarely slightly and minutely ligulate), the hermaphrodite florets mostly fertile. Achenes compressed. Pappus-bristles elongate. Involucre-bracts in 2 to many rows. Herbs or undershrubs.

Thespis. Female florets in 2 to many rows, destitute of a corolla, the hermaphrodite florets sterile. Pappus-bristles short, somewhat dilated at the base. Herbs.

× × Female florets in 2 or more rows not exceeding the disk, 2-toothed at the apex or bell-shaped. Herbs. (*Grangineæ*).

Cyathocline. Receptacle almost contracted around the margin, raised, the disk concave. Achenes not beaked, compressed, bordered with a marginal nerve. Flower-heads panicled.

Grangea. Receptacle convex or conical, naked. Achenes produced into a ring or neck toothed or almost bristly on the margins. Flower-heads solitary.

Dichrocephala. Receptacle almost contracted around the raised margin, the disk almost flat. Style-branches of the disk-florets acute. Achenes not beaked, compressed, bordered by a nerve. Flower-heads racemose or panicled.

* * *Female florets if present ligulate.*

× Ligulate female florets not yellow (white or rose-coloured to purple).

\+ Pappus none or very short (*Bellideæ*).

Myriactis. Involucre broad, the narrow bracts in few rows. Ligules in 2 or more rows, small. Achenes not or very shortly beaked, oily. Pappus none.

Rhynchospermum. Involucre-bracts in few rows, imbricate. Ligules in 2 or more rows, short and broad. Achenes beaked. Pappus of a few very caducous bristles or none.

\+ \+ Pappus of elongate bristles, rarely short and paleaceous or awned (*Heterochromæ*).

† Pappus consisting of very short bristles, scales, or awns, or absent in the ray-achenes.

Boltonia. Receptacle conical or convex. Bristles of pappus very short, almost paleaceous, often accompanied by 2—4 awns not exceeding the achene.

† † Pappus consisting of copious capillary bristles in a single or more rows (rarely depauperate in the ray-achenes).

‡ Ligules usually rather broad or ample.

Callistephus. Involucre hemispherical, the outer bracts leafy, the inner ones membranously scarious. Achenes compressed. Outer bristles of pappus very short and forming a small crown.

Aster. Involucre bell-shaped or hemispherical, the bracts in many rows, not or leafy appendaged, or squarrose, or with scarious margins, or herbaceous and in only 2 rows. Bristles of pappus in several to 2 rows, equal. Achenes usually much compressed.

‡ ‡ Ligules usually numerous, in 2 or more rows, narrow or almost filiform or minute.

Erigeron. Involucral bracts nearly in 2 rows, narrow, somewhat unequal. Achenes compressed. Bristles of pappus in a single row, or with a few very short outer ones.

× × Ligulate female florets (like the disk-florets) yellow. (*Homochromæ*).

Solidago. Ray-florets few. Involucre narrow, rather wide. Appendage of the style-branches usually lanceolate. Achenes obovoid or oblong. Bristles of pappus capillary, copious, somewhat unequal. Shrubs or undershrubs.

Subtrib. 7. *SENECIONIDEÆ.* Flower-heads either heterogamous, with the female florets ligulate or rarely filiform, or sometimes homogamous, with all the florets hermaphrodite and tubular. Receptacle usually naked. Involucre-bracts usually in a single row, with or without outer small ones, rarely in several rows and imbricate. Anthers obtuse or shortly 2-mucronate at the base. Style-branches of the hermaphrodites truncate and penicillate, or rarely with pubescent tips or appendages. Pappus of capillary bristles. Leaves alternate.

* *Involucre wide, the bracts membranous or herbaceous, elongate or acuminate.*

Doronicum. Flower-heads radiate. Involucre-bracts in 2 rows, equal, herbaceous, acuminate. Receptacle hemispherical. Herbs.

* * *Involucre-bracts narrow, stiff, usually ribbed or keeled.*

× Flower-heads heterogamous, discoid, the outer female florets filiform, shorter than their style.

Erechthites. Involucre etc. of *Senecio*. Female florets in 2 or more rows, the outer ones filiform. Flower-heads usually narrow, corymbose. Herbs.

× × Flower-heads radiate or homogamous. Bristles of pappus not feathery.

Gynura. Flower-heads homogamous. Style-branches terminating in an elongate shortly hairy subulate appendage. Rest as in *Senecio*. Herbs, often tuberous-rooted.

Emilia. Flower-heads homogamous. Style-branches terminating in a short or rather long appendage. Rest as in *Senecio*. Herbs.

Notonia. Flower-heads homogamous. Style-branches of hermaphrodites terminating in an ovate appendage. Rest as in *Senecio*. Fleshy glaucous herbs.

Senecio. Flower-heads radiate or homogamous. Involucre wide or narrow, the bracts narrow, equal, blunt or shortly pointed, the outer ones small or wanting, or rarely gradually longer from below. Style-branches truncate or obtuse, or rarely shortly appendaged. Achenes 5—10-ribbed. Herbs or rarely shrubs, the leaves alternate or radical.

* * *Flower-heads homogamous, all the florets regularly tubular, never yellow (usually purple, violet, or white).*

Subtrib. 8. *EUPATORIACEÆ.* Anther-base nearly entire. Style-branches almost terete or very elongate-club-shaped, obtuse, only minutely papillose. Leaves opposite or alternate.

* *Anthers appendaged at the tip. Achenes 5-ribbed* (Agerateæ).

× Bristles of pappus copious, smooth or minutely hairy.

Eupatorium. Involucre-bracts in several, rarely in 2—3 rows, somewhat unequal, always more than 5. Flower-heads usually many (rarely 1—4) flowered, corymbose or panicled.

Mikania. Involucre-bracts 4 only, somewhat unequal. Flower-heads 4-flowered, racemose or panicled. Twining shrubs.

× × Pappus entirely or partially chaffy or awned, or consisting of 5—10 rigid bristles, or minute and coronate, or none.

Ageratum. Involucre-bracts in 2—3 rows, somewhat unequal. Pappus of 5 short scales or long awns free or united into a shagged crown, or of 10—20 stiff bristles chaffy or dilated at the base. Herbs.

* * *Anthers truncate at the top and not appendaged. Achenes 5-ribbed.*

Adenostemma. Involucre-bracts numerous, almost in 2 rows, somewhat unequal. Pappus of 3—5 short stiff spreading bristles usually gland-tipped. Herbs.

Subtrib. 9. *VERNONIACEÆ.* Anther-base sagittate. Style-branches subulate, shortly hairy all over. Leaves usually alternate.

* *Flower-heads small, sessile, usually* 1- *or few-flowered, packed into a head-like cluster.* (Lychnophoreæ).

Elephantopus. Florets slightly irregular, by 2—5 in a head. Involucre-bracts usually 8, in 2 rows. Bristles or scales of pappus rigid, in 1 or 2 rows. Flower-heads clustered, the clusters leafy-involucred. Herbs.

* * *Flower-heads separate, usually peduncled and in more or less lax inflorescences.* (Vernonieæ).

× Pappus none or more usually composed of a few very caducous bristles.

Ethulia. Involucre bell-shaped, not leafy. Flower-heads small, corymbose. Achenes 4—5-cornered, broadly truncate at the top. Pappus none. Herbs.

Centratherum. Involucre wide, the outer bracts leafy or rarely only shortly leafy-appendaged. Flower-heads corymbose or solitary. Pappus of a few or numerous bristles. Herbs.

× × Pappus more or less persistent, composed of numerous capillary bristles in 2—3 rows, those of the outer row sometimes very short or reduced to scalelets.

Vernonia. Flower-heads various, the bracts in many rows, scarious or the outer ones sometimes leafy-appendaged. Receptacle naked or areolate. Achenes 10-ribbed or 4—5-cornered. Outer pappus as long as the inner, or shorter, very short, or none. Shrubs or herbs.

Trib. II. CYNAROCEPHALÆ, Vaill. Florets either regular and tubular with the style usually thickened joint-like near or at the apex, or bilabiate with the styles various. Herbs, rarely shrubs, not aromatic. Anther-base usually tailed or fringed.

Subtrib. 10. *CYNAROIDEÆ.* Flower-heads discoid, the florets all tubular and regular or nearly so, hermaphrodite, the lobes usually narrow. Anthers usually fringed or tailed at the base. Style usually thickened joint-like at or below the division into branches, which latter are narrow and obtuse, or slightly pointed and often erect. Leaves alternate, often spiny.

* *Flower-heads usually many-flowered, separate.*

× Achenes usually glabrous, seated in the very oblique or lateral areoles of the receptacle. (*Centaureæ.*)

\+ Involucre without floral leaves or outer leafy bracts.

Tricholepis. Involucre-bracts narrow, awned-acuminate, entire, not appendaged. Filaments shortly papillose-pilose. Anthers with rather long shaggy tails. Style-branches thin. Achenes glabrous, obtusely cornered or compressed. Leaves unarmed.

\+ + Involucre surrounded by spiny-toothed floral leaves or outer leafy bracts.

Carthamus. Outer involucral bracts with a large leafy appendage, inner ones spiny-pointed. Florets orange. Pappus none, or paleaceous. Achenes compressed or obtusely cornered. Leaves spiny-armed.

× × Achenes usually glabrous, seated in the straight areoles of the receptacle. (*Carduineæ*).

\+ Filaments papillose-pilose, free. Bristles of pappus united at the base into a ring and both deciduous.

Cnicus. Outer involucre bracts usually spiny armed, the innermost ones often unarmed. Receptacle densely covered with rigid bristles often longer than the achenes themselves. Bristles of pappus feathery or shortly bearded. Leaves spiny-armed.

\+ + Filaments glabrous, free.

Saussurea. Involucre not prickly. Pappus of numerous feathery bristles in a single row with or without a few simple ones outside. Receptacle with bristles between the florets. Leaves not armed.

* * *Flower-heads* 1-*flowered, packed into dense spherical heads. Achenes inserted in the straight areoles of the receptacle, silky-villous* (Echinopsidæ).

Echinops. Leaves and involucres spiny-armed. Thistle-like herbs.

Subtrib. 11. *MUTISIACEÆ.* Flower-heads either heterogamous, with radiating female florets, or homogamous, with the florets all hermaphrodite and tubular, in both cases some or all of the outer florets more or less 2-lipped. Anthers with pointed or tailed base. Style not or slightly thickened joint-like at the apex, the branches very short or elongate, rounded or truncate at the tips, not appendaged. Pappus bristly, paleaceous or rarely absent. Leaves radical or alternate, rarely opposite.

* *Flower-heads homogamous, the corollas tubular with the segments of limb narrow, equal or almost* 2-*lipped.* (Gochnatieæ).

× Flower-heads usually many-flowered.

Dicoma. Flower-heads usually almost sessile. Style-branches linear, long or shortened. Achenes densely villous. Scales or bristles of the pappus feathery, copious. Herbs.

× × Flower-heads few-flowered.

Leucomeris. Receptacle naked. Style-branches very short, conniving or almost spreading. Achenes oblong, silky-villous. Bristles of pappus smooth. Flower-heads corymbose. Shrubs or small trees.

Ainsliæa. Style-branches very short. Bristles of pappus feathery. Flower-heads 2—5-flowered, sessile or peduncled, racemose or panicled. Herbs.

* * *Flower-heads usually radiate, the corollas ligulate-2-lipped, rarely ligulate* (Gerbereæ).

Gerbera. Involucre turbinate or bell-shaped, the bracts unequal, imbricate. Ray-florets in 1 or 2 rows, 2-lipped, the ligules 3—4-nerved. Achenes usually beaked. Pappus reddish. Herbs, the leaves radical.

Subord. II. CICHORIACEÆ, Juss. Flower-heads homogamous, all the florets ligulate and hermaphrodite. Style not thickened at the apex, the branches filiform, revolute, and puberulous. Herbs, tall or small, never woody, with fistulose stems, the sap always milky.

* *Pappus paleaceous, awned, coronate or none.*

Subtrib. 1. *HYOSERIDEÆ.* Involucre various. Achenes truncate at the top. Pappus consisting more or less of small scales or scalelets alternating with bristles, or none.

Cichorium. Inner involucre-bracts in 1—2 rows, almost equal, erect, the outer ones short, lax or wanting. Pappus none or very minute. Florets large, blue. Rigid branched herbs.

* * *Bristles of pappus (at least those of the central achenes) capillary, smooth or feathery.*

Subtrib. 2. *CREPIDEÆ.* Involucre calyx-like or rarely imbricate. Achenes contracted at the base, rarely columnar. Herbs.

* *Hairs of indument simple. Innermost bracts of the involucre usually thickening at the base.* (Crepideæ).

Crepis. Involucre of a single row of nearly equal bracts, with a few small outer ones. Achenes not at all or scarcely flattened, very shortly contracted at the top. Pappus sessile, of numerous simple capillary bristles or hairs. Herbs with leafy stems.

Picris. Outer involucre-bracts small, numerous. Achenes very shortly contracted at the top. Pappus (at least of the central achenes) consisting of feathery bristles. Hispid herbs, with leafy stems.

* * *Hairs of indumentum (if present) stellate often accompanied by simple ones, or the indument intricately woolly. Innermost bracts of the involucre not thickening.* (Hieracieae.)

Hieracium. Receptacle naked or very shortly fibrillose. Bristles of the pappus rather stiff, fragile, persistent, simple. Herbs.

Subtrib. 3. *LACTUCACEÆ.* Involucre calyx-like or rarely imbricate. Achenes contracted at both ends, or beaked. Bristles of pappus simple. Herbs; the hairs if present simple.

* *Achenes shortly or long-beaked.*

Lactuca. Achenes more or less compressed, ribbed. Bristles of pappus persistent or deciduous. Florets yellow or blue.

* * *Achenes not beaked.*

Prenanthes. Achenes almost terete or somewhat compressed, bluntish 3—5-cornered, not or scarcely ribbed. Bristles of pappus more or less persistent. Florets purple to white, never yellow.

Sonchus. Achenes more or less compressed, ribbed. Bristles of pappus soft, white, at base united into a ring and deciduous with it. Involucral bracts often incrassate-dilated in fruit. Florets yellow.

Microrhynchus. Achenes columnar, truncate at both ends, bluntly 4—5-ribbed, sometimes narrowly 2—3-winged. Florets yellow.

Xanthium, L.

1. X. strumarium, L. sp. pl. 1400 DC. Prod. V. 524; Bth. Fl. Hongk. 181; Clark. Comp. Ind. 132. (*X. Indicum*, Roxb. Fl. Ind. III. 601; DC. Prod. V. 523; Wight Icon. t. 1104; Griff. Not. Dicot. 232; *X. Roxburghii*, Wallr. Beitr. Bot. I. 233; Walp. Rep. VI. 151; *X. discolor*, Wallr. l. c.; Walp. l. c.; *X. brevirostre*, Wallr. l. c.; Walp. l. c.; *X. inaequilaterum*, DC. Prod. V. 523; Wallr. Beitr. Bot. 232; Walp. Rep. VI. 151).

Hab. Frequent in rubbishy or waste places, along river-banks, etc., not only in the mixed forests, but more so in and around villages, all over Burma from Chittagong and Ava down to Tenasserim.—Fl. Fr. C. and HS.

Tridax, L.

*1. T. procumbens, L. sp. pl. ed. 1. 900; DC. Prod. V. 679; Clark. Comp. Ind. 142.

Hab. A weed like wild on old walls, in rubbishy places, etc., common about Chittagong; less so about Akyab in Arracan, and in Rangoon, and probably around other seaports, but not yet spread over the country as in India.—Fl. Fr. ∞.

Synedrella, Gærtn.

*1. S. nodiflora, Gærtn. Fruct. II. 456. t. 171; DC. Prod. V. 629; Clark. Comp. Ind. 139. (*Verbesina nodiflora*, L. Amoen. IV. 290).

Hab. Rubbishy places and neglected garden land in and around villages, rather frequent about Akyab, Arracan; Upper-Tenasserim, Moulmein (Dr. Stoliczka); on the Andamans now very common and penetrating to the clearings in the jungles.—Fl. Oct.—March; Fr. Febr.—May.

Cosmos, Cav.

Conspectus of Species.

Florets all purple to rose-coloured; achenes long and slenderly beaked, the beak terminated by 2 stiff awn-like bristles, ... *C. caudatus.*

Florets all yellow; achenes long but thickly beaked, the beak without pappus-bristles, .. *C. sulfureus.*

*1. C. CAUDATUS, H. B. K. Nov. gen. Amer. IV. 240; DC. Prod. V. 606; Griseb. Fl. West. Ind. 373.

HAB. As wild in neglected lands in and around Rangoon.—Fl. Nov., Dec.

*2. C. SULFUREUS, Cav. Icon. I. 56. t. 79; DC. Prod. V. 606; Griseb. Fl. West. Ind. 373. (*Coreopsis artemisiæfolia*, Jacq. Icon. III. t. 595; *B. calva*, Clark. Comp. Ind. 141; *Adenolepis calva*, Schultz. Bip. in Zoll. Cat. 123; Miq. Fl. Ind. Bat. II. 79).

HAB. Not unfrequent in the savannahs, and in rubbishy places near villages, about Akyab in Arracan, and in similar places in Rangoon up the valley as far as Phoungyee.—Fl. Nov.—Feb.

I am not at all sure whether the above synonymy is correct. The same plant (*Adenolepis calva*) has become quite a nuisance about Buitenzorg and other places in Java, entering freely the hill-savannahs.

Bidens, L.

Conspectus of Species.

Subg. 1. *Platycarpæa.* Achenes flat and rather broad.
Leaves divided into 3 lanceolate serrate segments, or pinnatifid, ...*B. tripartita.*
Subg. 2. *Psilocarpæa.* Achenes slender, 4-cornered.
Leaves mostly pinnately 4—3-foliolate. Ray-florets white, ...*B. pilosa.*
Leaves mostly bipinnate. Ray yellow. Slender dry herb,.....*B. bipinnata.*

1. B. PILOSA, L. sp. pl. 1166; DC. Prod. V. 597; Clark. Comp. 141 quoad var. *a* (*B. leucantha*, Willd. sp. pl. III. 1282; DC. Prod. V. 598; *B. Sundaica*, Bl. Bydr. 913; DC. Prod. V. 598).

HAB. Here and there springing up in deserted hill-toungyas and in betel-nut gardens of the Martaban hills east of Tounghoo, at 2—4000 ft. elevation; apparently more frequent in the northern hilly parts of Ava.—Fl. Fr. Sept.—March.

2. B. BIPINNATA, L. sp. pl. 1166; Roxb. Fl. Ind. III. 411; DC. Prod. V. 603; Bth. Fl. Austr. IV. 543. (*B. Wallichii*, DC. Prod. V. 598; *B. pilosa*, var. *β. Wallichii*, Clark. Comp. Ind. 141).

HAB. Tenasserim, Tavoy (Wall.). Fl. July—Oct.

Siegesbeckia, L.

1. S. ORIENTALIS, L. sp. pl. 1269; Roxb. Fl. Ind. III. 432; DC. Prod. V. 495; Bth. Fl. Hongk. 182 and Fl. Austr. IV. 535; Wight Icon. t. 1103; Clark. Comp. Ind. 133. (*S. brachiata*, Roxb. Fl. Ind. III. 432).

HAB. Here and there in deserted toungyas, but more frequent in the drier hill-forests of Martaban, at 2000—7100 ft. elevation; also Ava, Bhamo.—Fr. Jan.—March.

Enhydra, Lour.

1. E. FLUCTUANS, Lour. Fl. Coch. II. 625; DC. Prod. V. 637. (*E. Heloncha*, DC. Prod. V. 637; Clark. Comp. Ind. 133; *E. paludosa*, DC. l. c.; Bth. Fl. Austr. IV. 546; *E. longifolia*, DC. l. c.; *Hingtsha repens*, Roxb. Fl. Ind. III. 448).

HAB. Not unfrequent in swamps and swampy grass-lands of the cultivated plains of Pegu and Arracan, and probably all over the country; also Ava, Bhamo.—Fl. Fr. CS.

Eclipta, L.

1. E. ALBA, Hassk. Pl. Jav. rar. 528; Miq. Fl. Ind. Bat. II. 65; Bth. Fl. Hongk. 181 and Fl. Austr. IV. 536; Clark. Comp. Ind. 134. (*E. erecta*, L. Mant. 286; DC. Prod. V. 490; *Verbesina alba*, L. sp. pl. 1272; *E. longifolia*, Schrad. ap. DC. Prod. V. 490).

Var. α. ERECTA, Miq. Fl. Ind. Bat. II. 65; Clark. l. c.; more or less erect and appressed hispid; peduncles elongate, ¾—2 in. long.

Var. β. PROSTRATA, Miq. l. c.; Clark l. c. (*E. prostrata*, L. Mant. 286; Roxb. Fl. Ind. III. 438; DC. Prod V. 490; *E. parviflora*, Wall. in. DC. l. c.; *E. thermalis*, Bung. Enum. Pl. Chin. bor. No. 224; DC. l. c.; *E. procumbens*, Michx. Flor. Bor. Amer. II. 129; DC. l. c. 491; *E. brachypoda*, Mchx. l. c. 130; DC. l. c. 491), more or less prostrate, appressed hirsute; flower-heads shortly peduncled.

Var. γ. ZIPPELIANA, Miq. l. c.; Clark. l. c. (*E. Zippeliana*, Bl. Bydr. 914; DC. Prod. V. 490; *E. hirsuta*, Bartl. in Linn. XIII. Litt. Ber. 95), erect or spreading, more robust in all parts, spreadingly hirsute; flower-heads shortly petioled.

HAB. Var. α. and β. common in waste and in cultivated lands, along roadsides, ruined pagodas, etc., not only in the leaf-shedding forests, but more so in the cultivated plains, all over Burma, from Chittagong and Ava down to Tenasserim; also on the Andamans (here introduced, but rapidly spreading); var. γ. along the banks of the Irawaddi in the Prome District.—Fl. Fr. C. and H. S.

Wedelia, Jacq.

Conspectus of Species.

* *Some of the outer involucral bracts more leaf-like and longer than the others. Pappus cup-shaped.*

Flower-heads on very elongate peduncles, always solitary; leaves oblong to lanceolate, almost sessile or narrowed into a short petiole, ... *W. calendulacea.*

Flower-heads rather short-peduncled, usually by pairs or few, axillary, terminal and in the fork of the branchings; leaves ovate to ovate-lanceolate, slenderly petioled, .. *W. urticifolia.*

* * *Outer involucre-bracts not longer than the inner ones. Pappus none or of 2 or 1 deciduous bristles. Flower-heads longer or shorter peduncled, by 2—3 or few, axillary, terminal, and in the branch-forkings.*

Straggling perennial; leaves ovate or broadly ovate-lanceolate, ... *W. biflora.*
Erect, coarse annual; leaves lanceolate, ... *W. asperrima.*

1. W. CALENDULACEA, Less. Syn. 222, non Rich.; DC. Prod. V. 539; Wight Icon. t. 1107; Bth. Fl. Hongk. 182 and Fl. Austr. IV. 537; Clark. Comp. Ind. 136. (*Verbesina calendulacea*, L. sp. pl. 1272; Roxb. Fl. Ind. III. 440).

HAB. Frequent in the tidal forests and along river-banks as high up as the tidal waves, all along the coast from Chittagong and Arracan down to Tenasserim.—Fl. RS.

2. W. URTICIFOLIA, DC. in Wight Contr. 18 and Prod. V. 539; Wight Icon. t. 1106. Bth. Fl. Austr. IV. 538. (*W. biflora*, Clark. Comp. Ind. 137. excl. syn. sub. α.; *Verbesina biflora*, Roxb. Fl. Ind. III. 440, non L.)

HAB. Prome hills (Wall.).—Fl. Fr. Sept., Oct.

3. W. BIFLORA, DC. in Wight Contr. 18; Bth. Fl. Austr. IV. 539. (*Verbesina biflora*, L. sp. pl. 1272, non Roxb.; *Wollastonia biflora*, DC. Prod. V. 546; Wight Icon. t. 1108. Bth. Fl. Hongk. 183 excl. syn. ?; *W. scandens*, Clark. Comp. Ind. 136; *Verbesina scandens*, Roxb. Fl. Ind. III. 401; *Wollastonia insularis*, DC. Prod. V. 548; *Wollastonia Horsfieldiana*, Miq. Fl. Ind. Bat. II. 72).

HAB. Frequent in the tidal, and more especially in the beach-forests, all along the coasts from Chittagong down to Tenasserim and the Andamans.—Fl. Fr. ∞.

Tithonia, Desf.

*1. T. TAGETIFLORA, Desf. Ann. Mus. I. 46. t. 4; DC. Prod. V. 584; Bot. Reg. t. 591.

HAB. Upper Tenasserim, Attaran (Dr. Brandis), no doubt only an escape from cultivation.

Spilanthes, L.

Conspectus of Species.

Prostrate or ascending, branched; flower-heads solitary in the leaf-axils or in the forks of the branches, ... *S. Acmella.*
Erect, simple-stemmed; flower-heads panicled, ... *S. paniculata.*

1. S. ACMELLA, L. Syst. Veg. 610; Roxb. Fl. Ind. III. 410; DC. Prod. V. 623; Clark. Comp. Ind. 138 excl. var. δ.

Var. α. ACMELLA, Clark. l. c. (*Sp. calva* Wight Icon. t. 1109), achenes marginate, with the borders bristly-rough, usually crowned by 1 or 2 bristles.

Var. β. CALVA, Clark. l. c. (*Sp. calva*, DC. in Wight Contr. 19; DC. Prod. V. 625; S. pseudo-acmella, L. syst. veg. 610; DC. l. c.), achenes not or scarcely marginate and smooth on the margins; pappus usually obsolete.

Var. γ. OLERACEA, Clark. l. c. (*S. oleracea*, Jacq. Hort. Vind. II. t.

135; Roxb. Fl. Ind. III. 410; DC. Prod. V. 524), all parts more robust, the flower-heads more than twice the size and often solitary at the ends of the branchlets.

Hab. Var. α. common in waste and rubbishy places in and around villages, on road-sides, fallow fields, and toungyas, along river-banks, etc., not only in all leaf-shedding forests but more so in the cultivated tracts, up to 3000 ft. elevation.—Fl. Fr. C. and HS.

2. S. paniculata, Wall. Cat. 3186; DC. Prod. V. 625. (*S. acmella var. δ. paniculata*, Clark. Comp. Ind. 139).

Hab. Frequent in the mixed forests, and more so as a weed in toungyas, poonzohs, and other cultivated and waste lands in and around villages from Pegu and Martaban down to Upper Tenasserim.—Fl. CS.; Fr. C. and HS.

In my eyes a very distinct species. It is the ein-bee-zat of the Burmese, used for poisoning fish.

Tagetes, L.

Conspectus of Species.

Peduncles elongate and almost cylindrical; involucral bracts plain, ... *T. patula.*
Peduncles elongate, much swollen at the apex; involucral bracts almost angular *T. erecta.*

*1. T. patula, L. sp. pl. 1249; DC. Prod. V. 643; Sims. Bot. Mag. t. 150; Clark. Comp. Ind. 142.

Hab. Frequently cultivated not only by the Burmese but also by the Karens, and often seen springing up in recently abandoned toungyas.—Fl. CS.

*2. T. erecta, L. sp. pl. 1249; Roxb. Fl. Ind. III. 435; DC. Prod. V. 643; Clark. Comp. Ind. 143.

Hab. With the preceding, but less frequently seen.—Fl. CS.

Chrysanthemum, L.

Conspectus of Species.

Subg. 1. *Eu-Chrysanthemum.* Achenes of the ray almost triquetrous, the inner nerve produced at the apex into a tooth. Pappus scarcely any.
Flower-heads large, on long terminal or almost terminal peduncles; ray yellow, .. *C. coronarium.*

Subg. 2. *Pyrethrum.* Achenes oblong, irregularly 3—5-cornered. Pappus scarcely any.
Flower-heads numerous, on slender peduncles, in terminal corymbs; rays yellow, or in garden varieties variously (purple to white and orange) coloured, ... *C. Indicum.*

*1. Ch. coronarium, L. sp. pl. 1254; DC. Prod. VI. 64; Clark. Comp. Ind. 146. (*Ch. Roxburghii*, Desf. Cat. Hort. Par. ed. 3. 170; Bot. Mag. t. 1521; DC. Prod. VI. 64; *Pyrethrum Indicum*, Roxb. Fl. Ind. III. 436; Sims. Bot. Mag. t. 152).

Hab. Much cultivated in native gardens, especially in the drier districts, as Prome ; also Ava.—Fl. HS.

*2. Ch. Indicum, L. sp. pl. 1253 ; Roxb. Fl. Ind. III. 436 ; Bot. Reg. t. 1287 and 1502 (fl. plen.) ; Bot. Mag. t. 2556 ; Clark. Comp. Ind. 147. *(Pyrethrum Indicum*, Cass. Doct. XLIV. 149, non. Roxb. ; DC. Prod. VI. 62 ; *Chrysanth. tripartitum*, Sweet Fl. Gard. t. 193 ; *Ch. Chinese*, Sab. in Trans. Hort. Soc. Lond. IV. 330. t. 14 ; *Pyrethrum Sinense*, DC. Prod. VI. 62 ; Bot. Mag. t. 327 and 2042 ; Bot. Reg. t. 4. 445 and 616).

Hab. Ava, Taongdong (Wall.), probably cultivated.

Artemisia, L.

Conspectus of Species.

Sect. 1. *Dracunculus.* Flower-heads heterogamous, the ray-florets in a single row and female, the disk-florets bisexual but sterile by abortion of the ovaries.

More or less glabrous, the lower leaves simple, obovate-oblong, toothed at the apex, ..*A. parviflora.*

Sect. 2. *Abrotanum.* Flower-heads heterogamous, the ray-florets female, the disk-florets hermaphrodite : all fertile.

Leaves once or twice bipinnatifid, the segments rather broad and elongate, more or less greyish or silky-villose beneath ; flower-heads in large panicles, ...*A. vulgaris.*

Leaves twice or thrice bipinnatifid, glabrous, the segments almost filiform, acute ; flower-heads rather large, in loose panicles, ...*A. carvifolia.*

1. A. parviflora, Roxb. Fl. Ind. III. 420 ; DC. Prod. VI. 100 ; Clark. Comp. Ind. 159. (*A. glabrata*, Wall. Cat. 413 ; DC. Prod. VI. 100 ; Wight Icon. t. 1111).

Hab. Martaban, on the Nattoung hill (Rev. F. Mason) ; Ava hills east of Bhamo.

2. A. vulgaris, L. sp. pl. 1188 ; Engl. Bot. t. 978 ; Roxb. Fl. Ind. III. 420 ; Fl. Dan. t. VII. t. 1176 ; Hayne Arzn. Gew. II. 12 ; DC. Prod. VI. 112 ; Clark. Comp. Ind. 161. (*A. leptostachya*, DC. Prod. VI. 113).

Var. *α.* vulgaris, Clark. Comp. Ind. 161, leaves beneath white-tomentose, the segments usually sharply serrate and laciniate ; young flower-heads often woolly-villous.

Var. *β.* Indica, Clark. Comp. 162 (*A. Indica*, Willd. sp. pl. III. 1846 ; DC. Prod. VI. 114 ; Wight Icon. t. 1112 ; *A. dubia*, Wall. Cat. 3307 ; DC. l. c. 110), leaves usually green or greyish and little pubescent ; flower-heads lax and remote, adult nearly glabrous, often on short capillary peduncles.

Hab. Var. *α.* Karenee hills (O'Riley, Rev. F. Mason) ; Ava, Khakyen hills (J. Anderson) ; var. *β.* Ava, Khakyen hills, Taong-dong, etc.—Fl. Febr.—March.

3. A. carvifolia, Roxb. Fl. Ind. III. 422, err. typ. carnifolia ; DC. Prod. VI. 119 ; Clark. Comp. Ind. 162.

Hab. Prome, banks of the Irrawaddi near Meaday (R. Scott).—Fl. Apr.

Cotula, L.

1. C. anthemoides, L. sp. pl. 1256; DC. Prod. VI. 78; Bth. Fl. Hongk. 185; Clark. Comp. 149. (*Pleiogyne anthemoides*, C. Koch in Bot. Ztg. 1843. col. 40; *Pleiogyne cardiosperma*, Edg. in Linn. Trans. XX. 71).

Var. α. genuina, achenes winged.

Var. β. hemispherica, (*Machlis hemispherica*, DC. in Deless. Icon. Select. IV. t. 50; and Prod. VI. 140; Artemisia hemispherica, Roxb. Fl. Ind. III. 422; *Cotula hemispherica*, Wall. Cat. 3236; Clark. Comp. Ind. 150), achenes not winged.

Hab. Var. α. Ava, Irrawaddi valley near Sway-koo; and Khakyen hills east of Bhamo (J. Anderson); var. β. rather rare on the banks of the Irawaddi in Pegu; Ava, Bhamo (J. Anderson).—Fl. Fr. Jan.—March.

Myriogyne, Less.

1. M. minuta, Less. in Linn. VI. 219; DC. Prod. VI. 139; Bth. Fl. Hongk. and Fl. Austr. IV. 553 excl. syn. Lour. (*Cotula minuta*, Forst. Prod. 301; *Centipeda minuta*, Bth. ap. Clark. Comp. Ind. 151; *Artemisia sternutatoria*, Roxb. Fl. Ind. III. 423; *Dichrocephala Schmidii*, Wight Icon. t. 1610; *M. Cunninghamii*, DC. Prod. VI. 139; F. Muell. Pl. Vict. t. 41; *Centipeda Cunninghamii*, A. Braun and Aschers. Ind. Hort. Berol. 1867. 6; *Centipeda orbicularis*, Miq. Fl. Ind. Bat. II. 89, non Lour.; *Sphæromorphæa Russeliana*, DC. in Deless. Icon. sel. IV. t. 49; DC. Prod. VI. 140; *Centipeda minima*, A. Braun. and Aschers. in Ind. Hort. Berol. 1867. 6.; *Cotula*, sp., Griff. Not. Dicot. 237 ?).

Hab. Frequent in fields, fallow or under cultivation, in wastes and rubbishy places, river-banks, &c., all over Burma, from Chittagong and Ava down to Tenasserim; Andamans, now frequent on rice-fields (originally introduced).—Fl. Jan.—March; Fr. HS.

Centipeda, Lour.

1. C. orbicularis, Lour. Fl. Coch. II. 602; Clark. Comp. Ind. 151. (*Sphæromorphæa? Centipeda*, DC. Prod. VI. 140).

Hab. Adjoining provinces of Siam, in dried up marshes near Radbooree (Teysmann).—Fl. HS.

Inula, L.

Conspectus of Species.

× Stems not winged. Villous or villous-pubescent undershrubs. Bracts of the involucre narrow-linear. Flower-heads corymbose panicled. .. *I. cappa.*

× × Stems leafy-winged from the decurrent sessile leaves. Densely woolly villous tall annuals.

Flower-heads thick, woolly, and rather large, corymbose, the outer involucre-bracts leafy linear-oblong, ... *I. polygonata.*

1. I. CAPPA, DC. Prod. V. 469; Bth. Fl. Hongk. 180; Clark. Comp. Ind. 124. (*I. pseudo-Cappa*, DC. l. c. 469; *I. eriophora*, DC. l. c. 470; *I. salviodora*, Schultz. Bip. in Zoll. Cat. 122; Miq. Fl. Ind. Bat. III. 62; *Duhaldea Chinensis*, DC. Prod. V. 366; *I. oblonga*, DC. Prod. V. 469).

HAB. Common in the drier hill-, more especially the pine-forests of Martaban and Upper Tenasserim, up to 4000—5000 ft. elevation, descending into the eng- and hill-eng-forests, where it is not unfrequent; also Ava hills.—Fl. Febr., March; Fr. April, May.

2. I. POLYGONATA, DC. Prod. V. 465; Clark. Comp. 119.

HAB. Common in the eng- and hill-eng-forests all over Prome, Pegu, and Martaban, up to 2000 ft. elevation, most probably also in Ava.—Fl. CS.; Fr. HS.

N. B. *I. Oculus-Christi*, Clark. Comp. Ind. 120, has nothing to do with the Linnean plant, and is *I. obtusifolia*, Kerner Nov. sp. pl. II. 18.

Vicoa, Cass.

Conspectus of Species.

Slender, more or less roughish; leaves short; flower-heads only 2—2½ lin. across, .. *V. Indica.*

More robust, more glabrescent; leaves elongate-linear; flower-heads ½—⅝ in. in diameter, ... *V. appendiculata.*

1. V. INDICA, DC. Prod. V. 474; Wight Icon. t. 1148; Clark. Comp. Ind. 127. (*Inula Indica*, L. sp. pl. 1237; *V. aurita*, DC. l. c.; *V. auriculata*, DC. l. c.; *Doronicum calcaratum*, Roxb. Fl. Ind. III. 434).

HAB. Frequent in the eng and dry forests of the Prome District.—Fl. Jan.—March; Fr. March, April.

2. V. APPENDICULATA, DC. Prod. V. 474; Clark. Comp. Ind. 127.

HAB. Ava, apparently not unfrequent along the Irrawaddi.—Fl. Decb., Jan.

Pulicaria, Gærtn.

1. P. GLAUCESCENS, Clark. Comp. Ind. 130, excl. syn., non Bth.

HAB. Tenasserim (or Andamans?) (Helfer 3176).

Evidently no *Pulicaria*, and certainly not identical with the Persian plant. It looks more like *Pluchea*, but the pappus is different. The material at disposal is defective.

Cæsulia, Roxb.

1. C. AXILLARIS, Roxb. Corom. Pl. I. t. 93 and Fl. Ind. 447; Bot. Rep. t. 431; DC. Prod. V. 482; Wight Icon. t. 1102; Clark. Comp. Ind. 116. (*Meyera orientalis*, Don Prod. Nep. 180).

HAB. Chittagong.

Anaphalis, DC.

Conspectus of Species.

Leaves adnate but not decurrent at the base, 1-nerved; flower-heads peduncled, 3—4 lin. in diameter, corymbose; an adnate-lanate herb, ... *A. Royleana.*

Leaves more or less decurrent at the base, 3-nerved; flower-heads half the size, sessile and clustered, in corymbs; densely white adnate-woolly stout herb, ... *A. adnata.*

1. A. Royleana, DC. Prod. VI. 272; Clark. Comp. Ind. 104.

Hab. Here and there in the hill-toungyas of Martaban east of Tounghoo, at about 4—5000 ft elevation; also Ava hills.—Fl. March.

2. A. adnata, DC. Prod. VI. 274; Clark. Comp. Ind. 108.

Hab. Frequent in the drier hill-, especially the pine-forests, and on the hill-pastures of the higher ridges of Martaban, from 5400—7100 ft. elevation.—Fl. Nov.—Febr.; Fr. Febr.—March.

Gnaphalium, L.

Conspectus of Species.

* *Flower-heads corymbose, or the corymbs contracted and almost head-like.*

× Leaves linear, with a rounded base half-stem-clasping.

Tall annual; flower-heads laxly corymbose, tha involucral bracts yellow or brown, .. *G. hypoleucum.*

× × Leaves more or less spatulate-linear to cuneate-obovate.

Silky-villous herb much branched from the base; flower-heads densely clustered and forming leafless more or less lax corymbs, the involucre-bracts bright yellow or greyish pale yellow, ... *G. luteo-album.*

Simple or almost simple tender herb, thinly viscid-pilose; leaves obovate-cuneate, almost half-amplexicaul, thinly herbaceous; flower-heads in dense terminal almost head-like corymbs, the involucral bracts almost membranous, often more or less steel-blue coloured, ... *G. flaccidum.*

* * *Flower-heads clustered or rarely solitary in the axils of the leaves and usually gradually passing into a leafy terminal spike or head.*

Erect or spreading from the base, more or less silky-pilose; leaves elongate obovate-cuneate; flower-heads only about a line long, leafy spicate, ... *G. Indicum.*

As preceding, but flower-heads about 2 lin. long, the involucre-bracts firmer, .. *G. purpureum.*

Prostrate and spreading, the branchings only slightly leaved at the lower parts, more so upwards, the upper leaves forming stellate involucres to the densely crowded leafy heads, ... *G. crispatulum.*

1. G. hypoleucum, DC. in Wight Contr. 21 and Prod. VI. 222; Wight Icon. t. 1114; Bth. Fl. Hongk. 187; Clark. Comp. Ind. 114. (*G. confertum*, Bth. in. Lond. Journ. Bot. I. 488).

Hab. Frequent in the drier hill-, especially the pine-forests, and freely springing up as well in the clearings as on the hill-pastures, of Martaban, at 4000 to 6000 ft. elevation; also Ava-hills.—Fl. Fr. March.

2. G. luteo-album, L. sp. pl. 1198; Engl. Bot. t. 1002; Fl. Dan. t. 1763, DC. Prod. VI. 230; Clark. Comp. Ind. 114. (*G. pallidum*, Lamk.

Dict. II. 750; DC. Prod. VI. 230; *G. confusum*, DC. Prod. VI. 222; *G. multiceps*, Wall. Cat. 8949; DC. Prod. VI. 222; Bth. Fl. Hongk. 188; *G. ramigerum*, DC. Prod. VI. 222; *G. orixense*, Roxb. Fl. Ind. III. 425; *G. Javanicum*, DC. Prod. VI. 222; *G. Reinwardtianum*, Miq. Fl. Ind. Bat. II 91).

Hab. Common in cultivated lands, along river-banks, in deserted toungyas and open waste places, in all leaf-shedding forests, all over Burma and adjacent islands, up to 4000 ft. elevation.—Fl. Fr. Febr.—May.

3. G. flaccidum, Kurz MS.; Clark. Comp. Ind. 115.

Hab. Here and there in light bamboo-jungles (of *Bamb. arundinacea*) in the alluvial lands between the Irrawaddi and Lhein rivers in Pegu. —Fl. Jan.

4. G. Indicum, L. sp. pl. 1200; DC. Prod. VI. 231; Bth. Fl. Austr. IV. 655; Clark. Comp. Ind. 114. (*G. strictum*, Roxb. Fl. Ind. III. 424; *G. multicaule*, Roxb. Fl. Ind. III. 425; *G. Niliacum*, Raddi in Spreng. Syst. veg. III. 480; DC. Prod. VI. 231).

Hab. Common on fallow fields, along river-banks and roads, in waste places near and around villages, etc. of all the cultivated plains, but also in open somewhat moist or temporarily inundated grounds in all the leaf-shedding, especially the mixed forests, all over Burma, down to Tenasserim. —Fl. Fr. Jan.—May.

5. G. crispatulum, Del. Fl. Aeg. 123 t. 44. f. 3; DC. Prod. VI. 231; Clark. Comp. Ind. 115. (*G. depressum*, Roxb. Fl. Ind. III. 425; *Filago prostrata*, DC. Prod. VI. 249).

Hab. Not unfrequent in temporarily inundated places, in fallow rice-fields and along river-banks of the alluvium of Pegu and Prome.—Fl. CS.

Athroisma, DC.

1. A. laciniatum, DC. Prod. V. 369; Clark. Comp. Ind. 98. (*A. viscidum*, Zoll. and Mor. Cat. 122; Miq. Fl. Ind. Bat. II. 35).

Hab. Frequent in dried up river-beds and other temporarily inundated places and on the banks of the larger rivers, as Sittang, Irrawadi, Lhein, etc., of Pegu, Prome, and Martaban; also Tenasserim (Helf. 3127).—Fl. Fr. Jan.—May.

Pterocaulon, Ell.

1. P. Billardieri, F. Muell. Descript. Not. Papuan Pl. III. 43. (*Monenteles spicatus*, Labill. Sert. Nov. Caled. 43. t. 43; DC. Prod. V. 455; *P. cylindrostachyum*, Clark. Comp. Ind. 99).

Hab. Frequent in fallow fields, in neglected culture-land, along river-banks, all over Prome; Ava, along the Irrawaddi, and on Taongdong.—Fl. Fr. Jan.—March.

Sphæranthus, L.

Conspectus of Species.

Subg. 1. *Polycephalos*, Forsk. Outer bracts of the flower-heads longer than the flower-heads themselves, scarious and long-awned.

Glabrous, the branches only slightly winged; heads more oval, sessile, the empty bracts glabrous, ... *S. amarantoides.*

Glandular-puberulous, the branches leafy- and serrate-winged; heads shortly peduncled, the empty bracts appressed bristly and ciliate, ... *S. Peguensis.*

Subg. 2. *Eu-Sphæranthus.* Bracts shorter than the flower-heads and almost entirely hidden by them. Branches leafy-winged.

Pubescent or hirsute; heads globose $\frac{1}{2}$—$\frac{2}{3}$ in. thick, the involucre-bracts tapering into a subulate ciliate point, ... *S. hirtus.*

Glabrous; heads half the size, the involucre-bracts scarious, often jagged at the ends, .. *S. Indicus.*

1. S. Peguensis, Clark. Comp. Ind. 97.

Hab. Frequent on fallow fields and in waste lands of Prome; probably also Ava.—Fl. March.

I have not seen the Ava specimens of *Sph. amarantoides* referred to by DeCandolle, but suspect they belong to the above species.

2. S. hirtus, Willd. sp. pl. III. 2395; Wight Icon. t. 1094; Clark. Comp. Ind. 97. (*S. mollis*, Roxb. Fl. Ind. III. 546; DC. Prod. V. 369).

Hab. Common in fallow fields, in cultivated or deserted toungyas, along river-banks and similar places, all over Burma, from Chittagong down to Tenasserim.—Fl. November to April; Fr. April, May.

3. S. Indicus, L. Fl. Zeyl. 312; Roxb. Fl. Ind. III. 446. (*S. microcephalus*, Willd. sp. pl. III. 2395; DC. Prod. V. 369; Bth. Fl. Austr. IV. 522; Clark. Comp. Ind. 97).

Hab. Prome district; Upper Tenasserim, Moulmein.—Fl. Sept.—Apr.; Fr. C. and HS.

Epaltes, Cass.

1. E. divaricata, Cass. Bull. philom. 1818. 139; DC. Prod. V. 461; Clark. Comp. Ind. 96. (*Ethulia divaricata*, L. Mant. 110; Burm. Fl. Ind. 176. t. 58. f. 1; (*E. linearifolia*, DC. l. c.; *E. pygmaea*, DC. l. c.).

Hab. Prome hills (Wall).—Fl. Sept., Octob.

Blumea, DC.

Conspectus of Species.

* *Cauline leaves not decurrent on the branches. Florets golden to pale yellow, (except in the white or blue-flowered* B. Wightiana). (Apteræ, DC.)

× Flower-heads on long peduncles arising singly from the axils of the leaves, or rarely appearing compound from the reduction of the leaves.

Shrubby annual; leaves small, sessile with broad base and almost half-stem-clasping; involucre-bracts narrowed into filiform tails; peduncles almost glabrous, ..*B. amplectens.*

Low perennial, branched and ascending from the base, thinly pubescent; peduncles spreadingly pubescent; involucre-bracts very acute; leaves rather large, sessile with a rounded base, ... *B. bifoliata.*

× × Flower-heads in panicles, racemes, or rarely densely packed into shorter or longer spikes.

\+ Serratures or teeth of the leaves spiny indurated at their tips.

Spreading perennial, branched from the base and procumbent, sparingly pilose; leaves small, the serratures few and coarse; flower-heads few, forming irregular depauperate panicles, ... *B. oxyodonta.*

Erect, simple or branched annual, more or less appressed silky-pilose; leaves rather large, doubled-spiny-serrulate; flower-heads in regular panicles, ...*B. spinellosa.*

\+ + Serratures or teeth of the leaves various, but never spiny-indurated.

† Herbs, or biennials, simple or branched from the base, and more or less villous, pubescent, or viscid-puberulous, rarely almost glabrous.

O Flower-heads irregularly disposed and more or less pedunculed, forming panicles or rarely the panicle contracted.

△ Receptacle glabrous.

‡ Florets blue to violet, rarely bluish white.

Tall herb, reduced and small, more or less viscid-pubescent; leaves simple and petioled; flower-heads only 2 lin. long, on shorter or longer filiform peduncles, forming lax panicles, ... *B. Wightiana.*

‡ ‡ Florets all yellow. Flower-heads in lax panicles. Peduncles slender, although sometimes very short. Annuals, rarely becoming biennials.

Erect, branched from the base, more or less silky-villous, but not viscid, the cauline leaves simple and sessile or nearly so; flower-heads 3—3½ lin. long, in panicles sometimes pretty contracted but elongate, ... *B. lacera.*

Erect, branchy, thinly viscid-pubescent, the cauline leaves simple and petioled; flower-heads about 4 lin. long, on long slender glandular peduncles, forming lax panicles, ..*B. glandulosa.*

Erect, branchy, thinly puberulous, the cauline leaves (except in starved states) almost runcinate and petioled; flower-heads about 3 lin. long with the involucral-bracts green and glabrous, on spreading stiff capillary glabrous or glandular peduncles, in lax panicles, ... *B. diffusa.*

Erect, simple or branched, almost glabrous or usually more or less hirsute, the cauline leaves (especially the lower ones) more or less runcinate; flower-heads nearly 4 lin. long, with the involucral-bracts and the long slender peduncles pubescent, in lax panicles, ... *B. lactucæfolia.*

△ △ Receptacle hairy. Peduncles slender.

Branched or simple annual, shortly or rarely glandular-pubescent, the cauline leaves usually runcinate; flower-heads about 3½ lin. long, longer or shorter pedunculed, forming lax leafless panicles, ... *B. laciniata.*

O O Flower-heads clustered in the axils of the upper leaves and passing more or less gradually into a contracted spike-like panicle, or crowded in a dense terminal spike, or the sessile clusters remote and in simple or panicled slender spikes.

△ Receptacle hairy. Flower-heads sessile, clustered, or rarely solitary simple or panicled spikes.

Erect, simple or branched annual, slightly or rarely densely pubescent or pilose, the cauline leaves narrow and simple; flower-heads about 3 lin. long, often pilose or almost woolly, ... *B. fistulosa.*

△ △ Receptacle glabrous. Flower-heads more or less peduncled to almost sessile, clustered in the leaf-axils and forming leafy or leafless contracted spike-like panicles or spikes (rarely the panicle developed).

Erect slender annual, long silky-pilose, the leaves all cuneate-oblong to linear; flower-heads silky-pilose, nearly 4 lin. long, on longer or shorter slender peduncles or almost sessile, clustered in the upper leaf-axils and passing into a leafy spike-like contracted panicle, ... *B. barbata.*

Erect robust annual, villous to silky pubescent, the lower stem-leaves more or less spatulate-oblong or linear; flower-heads $\frac{1}{3}$—$\frac{1}{2}$ in. long, on short, thick, woolly-tomentose peduncles or almost sessile, forming dense spikes or spike-like (rarely lax) panicles often accompanied by clusters of flower-heads in the upper leaf-axils, .. *B. hieracifolia.*

† † Erect or scandent shrubs or under-shrubs, or tall shrub-like biennials.

O Erect.

△ Peduncles thick and short, densely tomentose. Leaves more or less villous or tomentose, especially beneath. Receptacle more or less hairy.

Leaves pubescent, especially beneath, decurrent and entire at the base; flower-heads 4 lin long, the involucral bracts narrow, almost glabrous; pappus rufescent; receptacle shortly pilose, ... *B. macrophylla.*

As preceding, but flower-heads larger, the involucral bracts densely pubescent, pappus white, ... *B. procera.*

Leaves silky to silvery villous beneath, with one or two pairs of small dissevered pinnæ on the petiole; flower-heads 4 lin. long, the involucral-bracts densely pubescent; pappus rufescent; receptacle almost glabrous, ... *B. balsamifera.*

△ △ Peduncles long and slender, puberulous to glandular-pubescent. Leaves narrow.

Glandular-pubescent, especially the leaves beneath, the cauline leaves all sessile, membranous; flower-heads 4—5 lin. long; receptacle glabrous, ... *B. aromatica.*

Almost glabrous, or the thick almost coriaceous leaves beneath shortly hirsute, the lower cauline leaves long-petioled; flower-heads 4—5 lin. long; receptacle densely silky pilose to glabrous, ... *B. sessilifolia.*

O O Scandent shrub. Leaves almost coriaceous, simple.

Almost glabrous; flower-heads 5 lin. long, in small axillary corymbs transforming into terminal pubescent panicles; receptacle villous; pappus white, ... *B. riparia.*

* * *Cauline leaves decurrent and forming entire or interrupted-lacerate leafy wings.*

Flower-heads long peduncled. Florets purple or rose-coloured (Caulopterae, *DC.*)

× Leafy cauline wings cut or variously interrupted.

Leaves pinnatifid-auricled at the base, ... *B. aurita.*

Leaves entire at the base, ... *B. pterodonta.*

× × Leafy cauline wings all entire and continuous..... *B. alata.*

1. B. AMPLECTENS, DC. in Wight Contr. Ind. Bot. 13 and Prod. V. 433; Clark. Comp. Ind. 71. (*B. arenaria*, DC. Prod. V. 433 ?; *B. tenella*, DC. l. c.; Miq. Fl. Ind. Bat. II. 40; *Conyza amplexicaulis*, Lamk. Dict. II. 85; *Erigeron obliquum*, L. Mant. 572 ?).

HAB. In rubbishy places near Chittagong; Andamans, introduced.—Fl. Fr. March, April.

2. B. BIFOLIATA, DC. Prod. V. 434; Clark. Comp. Ind. 72. (*Conyza bifoliolata*, Willd. sp. pl. III. 1920; Roxb. Fl. Ind. III. 430; *B. anagallidifolia*, DC. Prod. V. 433; *Bl. oligocephala*, DC. Prod. V. 434; *Conyza oligocephala*, Miq. Fl Ind. Bot. II. 41 ?; *Conyza humifusa*, Miq. Fl. Ind. Bat. II. 41).

HAB. Chittagong, in pastures and along roads; Pegu (Belanger).—Fl. Febr., March; Fr. April.

3. B. OXYODONTA, DC. in Wight Contr. 15 and Prod V. 444; Clark. Comp. Ind. 85. (*Conyza spinidens*, Miq. Fl. Ind. Bat. II. 44 excl. syn. ?)

HAB. Not unfrequent in dry sandy pasture-land, in waste places around and in villages, also river-banks of the Sittang and Irrawaddi delta of Pegu.—Fl. Fr. April—June.

4. B. SPINELLOSA, DC. Prod. V. 433 ?; Clark. Comp. Ind. 84.

HAB. Prome (Wall.).

De Candolle's *B. spinellosa* seems to be a spiny-toothed form of the silvery silk-hairy form of *B. hieracifolia;* Clarke's is near *B. lacera* (with slender peduncles), or near *B. barbata ?*

5. B. WIGHTIANA, DC. in Wight Contr. 14 and Prod. V. 435; Clark. Comp. Ind. 74. (*B. parvifolia*, DC. Prod. V. 437 ?; *B. trichophora*, DC. l. c. 436 *teste* Clark.; *B. hymenophylla*, DC. Prod. V. 440; *B. lacera β. hymenophylla*, Clark. Comp. Ind. 77).

HAB. Common in all mixed forests, especially along choungs, freely springing up in agrarian and waste lands, all over Burma, from Chittagong and Ava down to Tenasserim; also Andamans, here introduced and now spreading.—Fl. Fr. DS.

The colour of the florets and the much smaller size of the flower-heads combined with a viscid pubescence ought to remove all difficulties in distinguishing this species from *B. lacera*, with which Bentham and Thwaites are inclined to combine it. *B. hymenophylla* has pale blue or white florets and is certainly nothing but a slender shade-form which I found in all transitional states in company with *B. Wightiana* (not *B. lacera*, as Clarke states).

6. B. LACERA, DC. Prod. V. 436; Clark. Comp. Ind. 79 quoad var. α. (*Conyza lacera*, Roxb. Fl. Ind. III. 428).

HAB. Arracan, waste places near Akyab; no doubt to be found all over Burma and only overlooked.

7. B. GLANDULOSA, DC. Prod. V. 438; Bth. Fl. Hongk. 177. (*B. lacera*, β. *Heyneana* and γ. *glandulosa*, Clark. Comp. Ind. 78; *B. Heyneana*, DC. Prod. V. 441; *B. cernua*, DC. Prod. V. 436. *teste* Clarke).

HAB. Chittagong.

8. B. DIFFUSA, (*Conyza diffusa*, Roxb. Fl. Ind. III. 429; *B. virens*, DC. in Wight Contr. 14 and Prod. V. 439; Clark. Comp; Ind. 79; *B. lapsanoides*, DC. Prod. V. 440).

HAB. Frequent in the leaf-shedding forests, especially the mixed ones, all over Burma, from Chittagong and Ava down to Tenasserim and the Andamans.—Fl. Fr. C. and HS.

9. B. LACTUCŒFOLIA, DC. Prod. V. 435; Clark. Comp. Ind. 76. (*B. lacera* var. ε. *subcapitata*, Clark. Comp. Ind. 77. excl. syn. DC.).

Var. β. SUBSIMPLEX (*B. subsimplex*, DC. Prod. V. 441; Clark. Comp. Ind. 80; *B. paucifolia*, DC. Prod. V. 440; *A. cuneifolia*, DC. Prod. V. 441, *teste* Clarke), more glabrous and almost simple, the leaves obovate-cuneate and not lobed, but often passing into the runcinate form.

Var. γ. VISCOSULA, Clark. Comp. Ind. 80 sub *B. virente*, excl. syn. DC., densely and shortly glandular-pubescent, the leaves small and rather rigidly runcinate.

Var. δ. NUDIPES, more hirsute instead of pubescent; panicles more squarrose; stem usually naked and destitute of leaves to $\frac{1}{4}$—$\frac{1}{2}$ ft. from the ground.

HAB. Frequent in waste and cultivated lands, along river-banks, on walls, in and around villages, etc., all over Pegu and Martaban, and no doubt generally over Burmah; var. β. with the normal form and only a reduced state of it; var. γ. common in waste lands, on old pagodas and walls, etc. all over Pegu and Martaban down to Upper Tenasserim; var. δ. frequent in the upper mixed forests of the Pegu Yomah, but rare in those and in the eng-forests of Martaban east of Tounghoo.—Fl. Fr. C. and HS.

Mr. Clarke refers var. δ. to his *B. fasciculata*, but the long peduncled flower-heads and indeed the whole inflorescence are entirely different.

10. B. LACINIATA, DC. Prod. V. 436. (*Conyza laciniata*, Roxb. Fl. Ind. III. 427; *B. runcinata*, DC. Prod. V. 438; Clark. Comp. Ind. 78; *B. sonchifolia*, DC. Prod. V. 438; *B. cinerascens*, DC. l. c., *teste* Clarke).

HAB. Prome, Meaday (R. Scott).—Fr. April.

11. B. FISTULOSA, (*Conyza fistulosa*, Roxb. Fl. Ind. III. 429; *B. fasciculata*, DC. Prod. V. 442; Clark. Comp. Ind. 81).

Var. α. FASCICULATA, Clark. Comp. Ind. 82 (*B. fasciculata*, DC. l. c.;

B. fistulosa, Roxb. l. c.), spikes more or less panicled; receptacle tawny velvety, the velvet sometimes intermixed with a few white soft hairs.

Var. β. RACEMOSA, Clark. l. c. (*B. racemosa*, DC. Prod. V. 442), spikes almost simple or little branched; receptacles yellowish velvety.

Var. γ. GLOMERATA, Clark. l. c. (*B. glomerata*, DC. Prod. V. 443 *Conyza Burmeana*. Miq. Fl. Ind. Bat. II. 44), spikes more or less panicled; receptacles velvety, the velvet intermixed with copious soft white hairs.

Var. δ. HOLOSERICEA, Clark. l. c. (*B. holosericea*, DC. Prod. V. 442), more simple, thinly silky pilose, the spikes usually simple, rarely with a few additional basal ones, long-silky-pilose; receptacle shortly white pilose.

HAB. Var. α. β. and γ. equally common in all deciduous forests, especially the drier ones, on ruined pagodas and walls, in rubbishy places, along river-banks, etc.; and as a troublesome weed in deserted toungyas, especially in those of the hills, all over Burma, from Chittagong and Ava down to Tenasserim, up to 4,000 ft. elevation; var. δ. is a laterite form pretty frequent in the eng-and hill-eng forests of Martaban and Tenasserim, but rather rare in the upper dry forests of the Prome Yomah, up to 3,000 ft. elevation.—Fl. Fr. C. and HS.

The above varieties are, with the exception of δ, hardly worth keeping up. Bentham (Fl. Hongk. and Fl. Austr. IV. 526) refers *B. holosericea* DC. to his *B. hieracifolia*, but a scrap of Wallich's authentic specimens shews small sessile heads, indeed represents the upper part of the form correctly referred by Mr. Clarke to the above species. A Hongkong specimen named *B. holosericea* by Dr. Hance—I suppose on Bentham's authority—seems to belong either to the silvery-silky form of *B. lacera* or to *B. hieracifolia* (the flower-heads are too young).

12. B. BARBATA, DC. Prod. V. 434; Clark. Comp. Ind. 73.

Var. α. GENUINA, leaves broader or narrower; flower-heads on slender or short peduncles in a diffuse usually long-pilose panicle, or the panicle reduced and raceme-like but laxly contracted.

Var. β. SERICANS, leaves more elongate-cuneate to almost linear, appressed silvery pubescent like in *B. lacera;* flower-heads larger, almost sessile or thickly peduncled, clustered in the axils of the leaves and gradually passing into terminal dense spikes.

HAB. Var. α. Upper Tenasserim, Moulmein (Falconer); var. β. in the upper mixed forests, rare along the Zamayee choung in the Pegu Yomah, but more frequent in those along the Toukyeghat river in Martaban east of Tounghoo.—Fl. Febr., March; Fr. March, April.

13. B. HIERACIFOLIA, DC. Prod. V. 442; Wight Icon. t. 1099; Clark. Comp. Ind. 82.

Var. α. TYPICA, Clarke l. c. 83 (incl. his var. δ. *Hamiltonii* (*B. Hamiltonii*, DC. Prod. V. 439), little or not branched except from the base;

flower-heads clustered, forming dense terminal spikes. Radical leaves chiefly developed.

Var. β. EVOLUTIOR, Clark. l. c. 83, panicles more or less branched, larger or smaller; radical leaves none or marcescent.

HAB. Var. α. Tenasserim, Mergui (Wall.), a smaller form; var. β. Ava hills.

A species apparently very variable as to inflorescence and habit, the panicled form approaching *B. crinita* and *B. flexuosa* (if these be really distinct from one another), while the subscapiferous forms look somewhat like *Gnaphalium*. *B. lacera*, var. ε. *subcapitata*, Clark. (*B. subcapitata*, DC. Prod. V. 439), is in my eyes the same as Clarke's var. γ. *Nilagirica* of this species.

14. B. MACROPHYLLA, DC. Prod. V. 446; Clark. Comp. Ind. 88. (*Conyza macrophylla*, Bl. Bydr. 896; *B. procera*, DC. Prod. V. 445; Clark. Comp. Ind. 86; *B. semivestita*, DC. Prod. V. 445).

Var. β. PROCERA (*B. procera*, DC. Prod. V. 445; Clark. Comp. Ind. 86; *B. semivestita*, DC. l. c.), flower-heads larger; involucral bracts densely pubescent; pappus white.

HAB. Var. β. not unfrequent in the pine-forests of the Martaban hills, at 3—5000 ft. elevation, descending into the damp hill-forests and becoming more robust and large-leaved (*B. macrophylla*); also Ava, Khakyen hills (J. Anderson).—Fl. March, April; Fr. April.

15. B. BALSAMIFERA, DC. Prod. V. 447; Clark. Comp. Ind. 89, (*Conyza balsamifera*, L. sp. pl. 1208; Roxb. Fl. Ind. III. 427; *B. densiflora*, DC. Prod. V. 446; Clark. Comp. Ind. 88; *B. excisa*, DC. Prod. V. 446; *B. grandis*, DC. Prod. V. 447 ?; *Inula oblonga* var. α. DC. Prod. V. 4 quoad specim. e Taong-dong).

HAB. Common and freely springing up in and often exclusively covering deserted toungyas, but also in savannahs, along river-banks, etc., all over Burma, from Chittagong and Ava down to Tenasserim, up to 3,000 ft. elevation.—Fl. Fr. HS.

16. B. AROMATICA, DC. Prod. V. 446; Clark. Comp. Ind. 88.

HAB. Tenasserim.

Looks like a grandular-pubescent from of *B. sessilifolia*, DC.

17. B. SESSILIFOLIA, DC. Prod. V. 447. (*Conyza sessilifolia*, Bl. Bydr. 897; *B. myriocephala*, DC. Prod. V. 445; *B. squarrosa*, Clark. Comp. Ind. 87).

Var. α. GENUINA, receptacle more or less densely pilose; leaves beneath and involucral bracts often more hairy.

Var. β. LANCEOLARIA (*Conyza lanceolaria*, Roxb. Fl. Ind. VII. 432; *B. longifolia*, DC. Prod. V. 446; *B. Wallichii*, Clark. Comp. Ind. 87, excl. syn. plur.; *Conyza nitida*, Miq. Fl. Ind. Bat. II. 55. *teste* Clarke), receptacle glabrous, or in forms sparingly pilose.

Hab. Both varieties frequent along choungs in the tropical forests, and also often seen in the hill-toungyas, of Martaban and the Andamans; Upper Tenasserim; Ava, Khakyen hills.—Fl. Febr., March.

Nicobar specimens, and indeed Blume's *Conyza sessilifolia* itself, have the receptacle glabrous or sparingly silky pilose, and thus invalidate this artificial character.

18. B. riparia, DC. Prod. V. 444; Clark. Comp. Ind. 85. (*Conyza riparia*, Bl. Bydr. 899, non Kth).

Hab. Forests of South Andaman.—Fl. March.

19. B. alata, DC. Prod. V. 448; Wight Icon. t. 1101; Bth. Fl. Hongk. 177. (*Conyza alata*, Roxb. Fl. Ind. III. 430; *B. vernonioides*, DC. Prod. V. 447; *Conyza nutans*, Bl. Bydr. 896; Miq. Fl. Ind. Bat. II. 57; *Laggera alata*, Bth.; Clark. Comp. Ind. 91).

Hab. In the drier hill-forests, and in hill toungyas, of the Martaban hills east of Tounghoo; Karenee hills (Revd. Mason).

20. B. pterodonta, DC. in Wight Contr. 15 and Prod. V. 448; Wight Icon. t. 1100. (*Laggera pterodonta*, Bth.; Clark. Comp. Ind. 92).

Hab. Frequent in toungyas and poonzohs, chiefly of the hilly parts, of Pegu, Martaban, and Upper Tenasserim; also not unfrequently seen in the drier hill-forests, and ascending up to 6000 ft. elevation; Ava, Khakyen-hills; Chittagong.—Fl. Fr. March, April.

21. B. aurita, DC. Prod. V. 449. (*Conyza aurita*, Roxb. Fl. Ind. III. 428; *Laggera aurita*, Bth.; Clark. Comp. Ind. 92).

Hab. Here and there springing up in toungyas of Pegu and Martaban; more frequent along the Irrawadi in Prome; Ava (Griff. 3164). —Fl. Fr. March, April.

Doubtful Species.

1. *B. napifolia*, DC. Prod. V. 440.—Tavoy (Wall.).
2. *B. membranacea*, DC. Prod. V. 440.—Prome (Wall.).
3. *B. viscosula*, DC. Prod. V. 441, non Clark.—Taong-dong (Wall.).

Pluchea, Cass.

Conspectus of Species.

* *Annuals, glabrous. Florets intensely yellow. Corymbs irregular, small.*

Erect, simple or branched, the cauline leaves sessile with broad rounded base; flower-heads about 2½ lin. long, on rather short smooth peduncles, ... *P. Doniana.*

* * *Shrubs or undershrubs. Florets purple to lilac. Corymbs dense, terminal. (Receptacle glabrous).*

Leaves obovate, blunt or acute; flower-heads 22½ lin. long, the bracts shortly pubescent, bluntish to acute; shrub, ... *P. Indica.*

Leaves linear, glandular-pubescent, acuminate; flower-heads as in preceding, but the inner bracts more acuminate, ... *P. eupatorioides.*

1. P. Doniana, (*Erigeron falcatum*, Don. Prod. Fl. Nep. 172; *B. flava*, DC. Prod. V. 439; *B. senecioides*, DC. Prod. V. 439; *Laggera flava*, Bth.; Clark. Comp. Ind. 90; *Conyza repanda*, Roxb. Fl. Ind. III. 431, *teste* Clarke).

Hab. Common in all leaf-shedding forests, more especially in the eng-forests, where it is often reduced to a mere pygmy; all over Burma, from Chittagong and Ava down to Tenasserim.—Fl. Fr. C. and HS.

I place this species only reluctantly in *Pluchea*. But I cannot find any ally to it in *Blumea*, while here it has a very near one in *P. linearifolia*.

2. P. Indica, Less. in Linn. 1831. 150; DC. Prod. V. 451; Wight Illustr. t. 131 (flowers wrongly coloured yellow); Clark. Comp. Ind. 93 (*Baccharis Indica*, L. sp. pl. 1205; *Conyza corymbosa*, Roxb. Fl. Ind. III. 426; *P. foliolosa*, DC. Prod. V. 451 ?; Clark. Comp. Ind. 95 ?).

Hab. Frequent in the beach- and tidal forests, entering also the tidal savannahs; all along the coasts, from Chittagong down to Tenasserim and the Andamans.—Fl. CS.; Fr. HS.

3. P. eupatorioides, Kurz For. Fl. II. 575.

Hab. Adjoining Siamese province of Radbooree (Teysmann).—Fl. Fr. April, May.

N. B. *Laggera arida*, Clark. Comp. Ind. 92 = *Pluchea frutescens*, Bth. in Hook. Icon. pl. t. 1157.

Microglossa, DC.

1. M. volubilis, DC. Prod. V. 320; Clark. Comp. Ind. 57. (*Sonchus volubilis*, Rumph. Herb. Amb. V. t. 104. f. 1.; *Conyza pyrifolia*, Lamk. Dict. II. 89; *Conyza prolifera*, Bl. Bydr. 897; *Erigeron pyrifolius*, Bth. Fl. Hongk. 176).

Hab. Frequent in grass-jungles and old deserted toungyas all over Martaban and Tenasserim, up to 3500 ft. elevation; Ava, Khakyen hills. —Fl. Febr.; Fr. March.

Conyza, Less.

Conspectus of Species.

* *Flower-heads very small, not above a line long, very numerous, corymbose.*

Erect branched annual, shortly pubescent, the leaves small, simple or 3-cleft; pappus more or less rufescent, ... *C. pinnatifida.*

* * *Flower-heads* 2—4 *lin. long.*

× Pubescence not viscid nor glandular; leaves serrate to almost lobed, cuneate at base.

Erect, more or less branched annual, more or less hirsute; flower-heads spherical, corymbose; pappus white, ... *C. semipinnatifida.*

Erect, simple or more usually branched from the base, hirsute or pubescent; flower-heads not spherical, in dense terminal corymbs or clusters; pappus rufescent, .. *C. veronicæfolia.*

× × Glandular, otherwise almost glabrous; leaves almost entire, narrow. Erect, branched; flower-heads 2—2½ lin. long, on glandular puberulous peduncles, corymbose; pappus pinkish to pinkish white, ... *B. viscidula.*

1. C. PINNATIFIDA, Roxb. Fl. Ind. III. 430. (*C. absinthifolia*, DC. Prod. V. 383; Clark. Comp. Ind. 64).

HAB. Frequent in the drier hill-forests and more so in deserted and cultivated toungyas and open waste places, etc., of the Martaban hills, at 2—5000 ft. elevation; Ava, Khakyen hills.—Fl. Fr. Febr.—April.

2. C. SEMIPINNATIFIDA, Wall. Cat. 3058; DC. Prod. V. 382; Clark. Comp. Ind. 62.

HAB. Frequent along the banks of the larger rivers, such as the Irrawaddi and Sittang, from Prome and Martaban southwards.—Fl. Fr. HS.

3. C. VERONICÆFOLIA, Wall. Cat. 3005; DC. Prod. V. 382; Bth. Fl. Hongk. 176; Clark. Comp. Ind. 62. (*C. Japonica*, Less. Syn. 204; DC. Prod. V. 382).

HAB. Martaban, Nattoung, in the pine-forests, at about 7000 ft. elevation.—Fl. March.

4. C. VISCIDULA, Wall. Cat. 3006; DC. Prod. V. 383; Bth. Fl. Austr. IV. 496; Clark. Comp. Ind. 63. (*C. striata*, Wall. Cat. 3065; DC. Prod. V. 383; *C. Wallichii*, DC. l. c. 384 ex part.; *C. polycephala*, Edg. in Linn. Trans. XX. 66; Walp. Rep. VI. 720).

HAB. Common in toungyas and in open grassy spots, as well in the drier hill-forests of Martaban, up to 6000 ft. elevation, as in the Pegu and Prome Yomah, here descending as low as to 3—400 ft. elevation; also Tenasserim.—Fl. Fr. Jan.—March.

Thespis, DC.

1. TH. DIVARICATA, DC. Prod. V. 375; Clark. Comp. Ind. 65. (*Th. erecta*, DC. Prod. V. 375).

HAB. Rather frequent along the banks of the larger rivers, as along the Sittang and Irrawaddi in Pegu; Chittagong, on the banks of the Megna.—Fl. May, June; Fr. RS.

Cyathocline, Cass.

1. C. LYRATA, Cass. in Ann. d. sc. nat. 1829. 34; DC. Prod. V. 374; Wight Icon. t. 1098; Clark. Comp. Ind. 37 (*Artemisia hirsuta*, Rottl. in Spreng. Syst. III. 490; *C. stricta*, DC. Prod. V. 374).

HAB. Common on rock-walls and mossy boulders, etc. in the choungs and torrents all over Burma, from Chittagong and Ava down to Pegu and Arracan.—Fl. Fr. CS.

Grangea, Ad.

1. G. Maderaspatana, Poir. Dict. Suppl. III. 825; DC. Prod. V. 373; Wight Icon. t. 1097; Clark. Comp. Ind. 37. (*Artemisia Maderaspatana*, Roxb. Fl. Ind. III. 412).

Hab. A common weed in fallow agrarian lands, along the banks of rivers, waste places in and around villages, etc., all over Burma, down to Tenasserim.—Fl. C. and HS.; Fr. HS.

Myriactis, Less.

1. M. Wallichii, Less. in Linn. 1831. 127; DC. Prod. V. 309; Clark. Comp. Ind. 38.

Hab. Martaban, in open grassy places and along the outskirts of the hill-forests on Nattoung, at about 6—7000 ft. elevation.—Fr. CS.

Rhynchospermum, Rwdt.

1. R. verticillatum, Rwdt. in Bl. Bydr. 902; DC. Prod. V. 296; Miq. Fl. Ind. Bat. II. 32; Clark. Comp. Ind. 39. (*Leptocoma racemosa*, Less. and NE. in Linn. 1831. 130; DC. Prod. V. 280; *Zollingeria scandens*, Schultz. Bip. in Reg. Flor. 1854. 274; Walp. Ann. V. 250.)

Hab. Ava, hills east of Bhamo (J. Anderson).—Fr. September.

Boltonia, L'Her.

1. B. Indica, Bth. Fl. Hongk. 174; Clark. Comp. Ind. 40. (*Aster Indicus*, L. sp. pl. 1230; Burm. Fl. Ind. 181; *Asteromoea Indica*, Bl. Bydr. 901; DC. Prod. V. 303; *Calimeris integrifolia*, DC. Prod. V. 259, *teste* Clarke; *Callistemma Indicum*, G. Don in Lond. Hort. Brit. t. 348; *Hisutsua Cantoniensis*, DC. Prod. VI. 44; *Hisutsua serrata*, Hook. and Arn. Bot. Beech. 265; *Chrysanthemum cuneatum*, Roxb. Fl. Ind. III. 436).

Hab. Ava, Khakyen hills (J. Anderson).—Fl. May—September.

Callistephus, Cass.

*1. C. Chinensis, NE. Aster. 221; DC. Prod. V. 274; Clark. Comp. Ind. 41. (*Aster Chinensis*, L. sp. pl. 1232; Roxb. Fl. Ind. III. 433).

Hab. Cultivated in gardens of Burma (*teste* Clarke).

Erigeron, L.

1. E. Ægyptiacum, L. Mant. 112; Jacq. Hort. Vindob. III. 19. (*Conyza Ægyptiaca*, Ait. Hort. Kew. III. 183; DC. Prod. V. 382; Bth. Fl. Austr. IV. 497; *E. asteroides*, Roxb. Fl. Ind. III. 432; *E. hispidum*, DC. Prod. V. 292; Clark. Comp. Ind. 54; *Conyza asteroides*, Wall. Cat. 3052, non L.; DC. Prod. V. 382; *Blumea pubiflora*, DC. Prod. V. 434; *E. sublyratum*, Roxb. ap. DC. Prod. V. 292; *Conyza Jerdoni*, Clark. Comp. Ind. 62, fol. subpinnatifidis et radio apparenter deficiente).

Hab. Pegu and Martaban, not unfrequent along the banks of the Sittang; most probably also elsewhere.—Fl. Fr. May.

The ligulate ray-florets seem to be sometimes absent, at least in dried specimens they appear so. The Egyptian plant agrees in all parts with the Indian, but appears to be often ray-less.

N. B. *Conyza angustifolia*, Roxb. Fl. Ind. III. 429. (DC. Prod. V. 83), appears from the description and MS. figure to be a luxuriant form of *E. Canadensis*, L., or *E. linifolius*, Willd., and is, therefore, hardly an Andamanese plant.

Gynura, Cass.

Conspectus of Species.

Pubescent; leaves rather small, ovate to linear-lanceolate, repand-toothed, acuminate; peduncles and involucral bracts hoary pubescent, ... *G. Nepalensis.*

Pubescent, the root tuberous; leaves more or less laciniate to pinnatifid; peduncles and involucre-bracts less hairy, ... *G. sinuata.*

1. G. Nepalensis, DC. Prod. VI. 3000; Clark. Comp. Ind. 171. (*G. foetens*, DC. l. c.).

Hab. Ava, Irrawaddi, on the Pingee rocks (Wallich).—Fl. Oct.

2. G. sinuata, DC. Prod. VI. 301; Clark. Comp. Ind. 173.

Hab. Frequent in the eng- and low forests of the Sittang valley in Pegu, and in those of Martaban.—Fl. April, May; Fr. June.

As long as it is young, the plant looks almost scapiferous and the leaves are then simpler and smaller, but at the rate that the tuberous roots enlarge the plant becomes more robust, larger, and branched from the base with the leaves up to 7 in. long.

Notonia, DC.

1. N. crassissima, DC. Prod. VI. 442. (*Composita*, Griff. Not. Dicot. 252. t. 470).

Hab. Ava, on the limestone-hills near Segain (Wall., Griff.)—Fl. May.

Emilia, Cass.

Conspectus of Species.

Achenes papillose-rough; style-branches erect, half-cylindrical with a short conical appendage; lower leaves more or less lyrate, ... *E. sonchifolia.*

Achenes quite glabrous; style-branches elongate, recurved, almost club-shaped at the apex; lower leaves elongate-spatulate, ... *E. prenanthoidea.*

1. E. sonchifolia, DC. Prod. VI. 302; Clark. Comp. Ind. 174. (*Cacalia sonchifolia*, L. sp. pl. 1169, non Forsk.; Roxb. Fl. Ind. III. 413; *Gynura ecalyculata*, DC. Prod. VI. 298; *E. sagittata*, DC. Prod. VI. 302; *E. flaccida*, Miq. Fl. Ind. Bat. II. 102; *Senecio sonchifolius*, Bth. Fl. Hongk. 189).

Hab. Common in agrarian and garden land, in deserted toungyas, in waste and rubbishy places, along river-banks, etc., also in the savannahs, all over Burma, from Chittagong and Ava down to Tenasserim.—Fl. C. and HS.; Fr. HS.

2. E. PRENANTHOIDEA, DC. Prod. V. 303; Clark. Comp. Ind. 176 (*E. angustifolia*, DC. l. c.).

Hab. Ava, hills east of Bhamo (J. Anderson).—Fl. Fr. Aug.

Senecio, L.

Conspectus of Species.

Subg. 1. *Eu-Senecio.* Anthers not tailed at the base. Achenes all with, or those of the ray, without pappus.

* *Achenes all with pappus.*

Almost glabrous, the flower-stems almost scapiform; lower leaves elongate-cuneate-oblong; flower-heads short peduncled, in dense corymbs; achenes of the disk papillose-rough; pappus white, ... *S. obtusatus.*

Almost glabrous or more or less hirsute; leaves narrow-linear, with involute margins; flower-heads long-peduncled, few; achenes papillose-rough; pappus more or less pubescent, ... *S. Griffithii.*

* * *Achenes of the ray without pappus.*

Roughish hirsute; leaves elongate-linear, narrowed at the base; flower-heads in lax corymbs; achenes striate, glabrous; pappus rufescent, ... *S. saxatilis.*

Subg. 2. *Synotis.* Anthers tailed, the tails free or adnate.

* *Erect shrubs or undershrubs.*

Stem and leaves beneath white-tomentose; flower-heads radiate, rather large, in dense corymbose panicles; achenes glabrous; pappus white, ... *S. densiflorus.*

Glabrous or nearly so; flower-heads small, glabrous, discoid, in small dense corymbs; achenes glabrous; pappus white, ... *S. triligulatus.*

* * *Scandent shrubs or undershrubs.*

Stems almost zigzag-flexuose, slightly woolly and glabrescent; flower-heads discoid, rather large, in divaricate corymbose panicles; achenes difform, those of the disk 5-gonous with pilose corners and white pappus, the ray-achenes glabrous, almost trigonous. ..... *S. Chinensis.*

1. S. OBTUSATUS, Wall. Cat. 3133; DC. Prod. VI. 367; Clark. Comp. Ind. 192.

Hab. Ava, Khakyen hills east of Bhamo. (J. Anderson). Fl. May.

2. S. GRIFFITHII, Hf. and Th. MS.; Clark. Comp. Ind. 193.

Var. α. GENUINA, leaves longer and glabrous or nearly so; flower-heads longer peduncled, the involucral bracts nearly glabrous.

Var. β. KURZII, Clark. Comp. Ind. 194. a fruticulose undershrub, the leaves hirsute on both sides or almost chaffy pilose along the midrib beneath; flower-heads shorter peduncled, the involucral-bracts more pubescent.

Hab. Var. β. rather frequent on rocks and in open grassy places in the pine-forests of the highest ridges of the Martaban hills, at 6000—7100 ft. elevation.—Fl. Jan., Febr.; Fr. March.

3. S. SAXATILIS, Wall. Cat. 3131; DC. Prod. VI. 367.

HAB. Ava, Taong-dong (Wall.).

Judging from the description only it seems allied to *S. linifolius*, *S. pilosulus*, etc.

4. S. DENSIFLORUS, Wall. Cat. 3116; DC. Prod. VI. 369; Clark. Comp. Ind. 185. (*S. angulosus*, DC. l. c.; *S. uncinellus*, DC. l. c. 368).

HAB. Frequent in grassy and open places in the drier hill-forests, especially the pine-forests, of Martaban, at 3000—6000 ft. elevation.—Fl. Febr., March; Fr. March, April.

5. S. TRILIGULATUS, Ham. in Don. Prod. Fl. Nep. 178; DC. Prod. VI. 368. (*S. vagans*, Wall. Cat. 3108; DC. Prod. VI. 368; Clark. Comp. Ind. 188).

HAB. Ava, Khakyen hills east of Bhamo (J. Anderson).—Fr. March.

6. S. CHINENSIS, DC. Prod. VI. 363; Bth. Fl. Hongk. 190. (*Cineraria Chinensis*, Spreng. Syst. III. 549; *Cineraria repanda*, Lour. Fl. Coch. II. 613, non Willd.; *S. campylodes*, DC. Prod. VI. 376; Clark. Comp. Ind. 183; *S. Hindsii*, Bth. in Lond. Journ. Bat. I 488).

HAB. Ava, Khakyen hills, east of Bhamo (J. Anderson).—Fl. March.

Doubtful species.

7. S.? PEGUANUS, DC. Prod. VI. 365.

HAB. Pegu (Belanger).

This, according to Aug. Pyr. DeCandolle, has the habit, leaves, and achenes of *Cineraria*.

Eupatorium, Tournef.

Conspectus of Species.

× Leaves penninerved.

Corymbs of few small few-flowered flower-heads, ... *E. Birmanicum.*

Flower-heads numerous, in corymbose, elongate panicles, ... *E. Punduanum.*

× × Leaves triplinerved.

Flower-heads numerous, in corymbs, ... *E. Wallichii.*

1. E. BIRMANICUM, DC. Prod. V. 179, *vix* Clarke.

HAB. Ava, Segain (Wall. 3290).

2. E. PUNDUANUM, Wall. Cat. 3170; DC. Prod. V. 179; Clark. Comp. Ind. 33. (*E. nodiflorum*, Wall. Cat. 3166; DC. Prod. V. 179; Clark. Comp. Ind. 33).

HAB. Burma (*teste* Clarke, non DC.)

Bentham (Fl. Hongk. 172) refers this species to the following, and the penninervation really seems to be a fallacious character.

3. E. WALLICHII, DC. Prod. V. 179. (*E. cannabinum*, Clark. Comp. Ind. 34, non L.).

HAB. Upper Burma (*teste* Clarke).

Mikania, Willd.

1. M. SCANDENS, Willd. sp. pl. III. 1743; DC. Prod. V. 199; Clark. Comp. Ind. 34. (*Eupatorium scandens*, Burm. Fl. Ind. (1746) 176. excl. syn.; *Eupatorium cordatum*, Burm. Fl. Ind. 176 t. 58. f. 2; *Eupatorium volubile*, Vahl. Symb. (1794) III. 93; *M. volubilis*, Willd. sp. pl. III. 1743, DC. Prod. V. 199).

HAB. Upper Tenasserim, Attaran (Wall. Cat. 3174).—Fl. May.

Ageratum, L.

1. A. CONYZOIDES, L. sp. pl. 1175; Hook. Exot. Fl. t. 15; DC. Prod. V. 108; Schlechtdl. in Linnæa XXXIX. 493, Clark. Comp. Ind. 30. (*Ageratum cordifolium*, Roxb. Fl. Ind. III. 415).

HAB. A common weed in all cultivated and waste lands, along river-sides, deserted toungyas, etc., springing up in the forests wherever light permits, all over Burma and adjacent islands; Andamans, introduced and rapidly spreading. Fl. R. S.

Adenostemma, Forst.

1. A. VISCOSUM, Forst. Nov. gen. no. 15; DC. Prod. V. 111; Bth. Fl. Hongk. 171; Clark. Comp. Ind. 28. (*Ageratum aquaticum*, Roxb. Fl. Ind. III. 416; *A. fastigiatum*, DC. Prod. V. 111; *A. Roylei*, DC. Prod. V. 112; *A. elatum*, Don Prod. Fl. Nep. 181; DC. Prod. V. 112; Wight Icon. t. 1087; *A. rugosum*, DC. Prod. V. 112; *A. Madurense*, DC. Prod. V. 112; *A. rivale*, Dalz. in Hook. Kew. Gard. Misc. III. 231).

Var. α. VERUM, Clark. Comp. Ind. 29 (incl. varr. *elatum* and *latifolium*, Clark. l. c.), larger, the leaves larger and broader, often somewhat succulent; flower-heads larger; achenes more or less glandular muricate.

Var. β. MICROCEPHALUM, Clark. l. c. 29 (*A. microcephalum*, DC. Prod. V. 111), as preceding, but usually thinner and the leaves smaller; heads very small.

Var. γ. ANGUSTIFOLIUM, Clark. l. c. 29 (*A. angustifolium*, Edg. in Journ. As. Soc. Beng. XXI. 173; Walp. Ann. V. 153), leaves elongate-linear, rest as in var. α.

Var. δ. RETICULATUM, Clark. l. c. 30 (*A. reticulatum*, DC. Prod. V. 112; Wight Icon. t. 1088; *A. leiocarpum*, DC. Prod. V. 112; *A. erectum*, DC. Prod. V. 113), as var. α., but leaves somewhat rough above and often more or less lacunose, tawny pubescent on the nerves beneath; achenes smooth.

HAB. var. α. frequent in the mixed forests of the Pegu and Arracan Yomah; Ava hills; var. β. along with the typical form but scarcer; var. (?) γ. Tenasserim (Helf. 3109).—Fl. Fr. C. and HS.

Elephantopus, L.

1. E. SCABER, L. sp. pl. 1313; DC. Prod. V. 86; Roxb. Fl. Ind. III. 445; Wight Icon. t. 1086; Bth. Fl. Hongk. 171; Clark. Comp. Ind. 28. (*E.* sp Griff. Not. Dicot. 222).

HAB. Common in dry grass-land, rubbishy places, along the borders of fields and rivers, of the cultivated plains and also in the mixed forests (especially the upper ones), all over Burma, from Chittagong and Ava down to Tenasserim.—Fl. Sept.—March.

Ethulia, L.

1. E. CONYZOIDES, L. sp. pl. 1171; Linn. f. Dec. I. t. 1; Bot. Reg. t. 695; DC. Prod. V. 12; Clark. Comp. Ind. 1. (*E. ramosa*, Roxb. Fl. Ind. III. 413).

HAB. Chittagong, banks of the Megna near Comillah (Clarke).—Fl. April, May; Fr. RS.

Vernonia, Srhreb.

Conspectus of Species.

Subg. 1. *Cyanopis.* Flower-heads small. Achenes 4—5-cornered or terete, not ribbed. Outer row of pappus bristly or paleaceous. Low annual herbs.

* *Achenes 4-cornered.* (Cyanopis, Bl.)

Greyish puberulous or thinly pubescent; flower-heads broad, in poor corymbs; involucral bracts stiff, squarrose, acuminate, ... *V. Chinensis.*

* * *Achenes terete* (Tephrodes).

Greyish puberulous; flower-heads 2½—3 lin. long, corymbose-panicled, ... *V. cinerea.*

Subg. 2. *Eu-Vernonia.* Flower-heads rather large or rarely small. Achenes longitudinally ribbed. Involucre-bracts all scarious, not leafy nor leafy-appendaged.

* *Undershrubs or herbs. Involucre-bracts elongate, especially the inner ones, and usually narrow.*

× Outer involucral bracts subulate and squarrose, passing on to the peduncle. Outer pappus consisting of numerous almost chaff-like bristles.

Slightly puberulous; leaves narrow or broad, shortly petioled or almost sessile; flower-heads rather large, on long stiff peduncles, corymbose-panicled; achenes densely villous, ... *V. bracteolata.*

× × Outer involucral bracts rather broad and short, more or less appressed-imbricate.

\+ Outer series of pappus consisting of a few caducous bristles or almost wanting.

† Flower-heads large, many-flowered, solitary or few, or in poor corymbs. Involucral-bracts very acuminate. Harsh-leaved undershrubs or herbs. (*Xipholepis.*)

Flower-heads long-peduncled, in lax corymbs; achenes 2 lin. long, glabrous; bristles of pappus bristly, ... *V. bracteata.*

Flower-heads short-peduncled, in compact corymbs; achenes 1 lin. long, sparingly pilose; bristles of pappus smooth, ... *V. Roxburghii.*

Flower-heads sessile or nearly so, clustered or solitary; achenes 1 lin. long, appressed pilose; bristles of pappus smooth, ... *V. squarrosa.*

† † Flower-heads small or rather small, few- (not above 15-) flowered, in ample corymb-like panicles. Involucral bracts bluntish or hardly acuminate. (*Gymnanthemum.*)

Roughish puberulous; leaves narrow, rarely broad; flower-heads only 3 lin. long, numerous, in axillary and terminal corymbs, ... *V. aspera.*

Roughish puberulous; leaves rather broad or narrow; flower-heads 4—5 lin. long, shortly peduncled, in axillary and terminal panicled corymbs, ... *V. saligna.*

+ + Outer series of pappus consisting of numerous or copious bristles. Involucral bracts acuminate. (*Lepidaploa.*)

Leaves broad, roughish puberulous; flower-heads peduncled, in small sessile pubescent axillary corymbs, or corymbose-panicled at the end of the branches; involucral bracts white woolly, ... *V. Kingii.*

Leaves narrow, roughish puberulous, chartaceous; flower-heads shortly peduncled or sessile, solitary or few in the leaf-axils, irregularly disposed raceme-like or forming terminal poor corymbs; involucral bracts nearly glabrous, ... *V. attenuata.*

* * *Large shrubs or trees, rarely scandent. Flower-heads usually small and few-flowered.*

× Pappus more or less tawny to red-brown. Involucre-bracts elongate especially the inner ones. Scandent shrubs.

Glabrous or nearly so; flower-heads ½ in. long, shortly peduncled, in small corymbs panicled at the end of the branches; leaves petioled; achenes pilose, .. *V. blanda.*

As preceding, but shortly puberulous; achenes glabrous, ... *V. scandens.*

× × Pappus white or whitish to pale straw-coloured. Involucre-bracts short and rather broad. Flower-heads small. (*Strobocalyx.*)

+ Trees or erect shrubs.

× Leaves sessile or very shortly petioled.

Small tree, pubescent or puberulous; leaves cuneate-narrowed, shortly petioled; flower-heads shortly peduncled, corymbulose, in terminal leafless panicles; involucre-bracts slightly and fugaceously appressed pubescent, ... *V. volkameriaefolia.*

× × Leaves rather long-petioled.

Meagre shrub or small tree, softly tomentose; leaves broad; flower-heads shortly peduncled, corymbose-panicled; involucral bracts densely white-tomentose, .. *V. Kurzii.*

Tree; leaves coriaceous, long-petioled, densely tomentose beneath, glabrescent above or rarely also beneath; flower-heads sessile or nearly so, clustered, in corymb-like tomentose panicles; involucre-bracts thinly appressed pilose, ... *V. arborea.*

+ + Scandent shrubs.

Stem and leaves beneath appressed silvery pubescent; flower-heads almost sessile, divaricate corymbose and panicled; involucre-bracts glabrous, ciliate, .. *V. elaeagnifolia.*

Subg. 3. *Hololepis.* Outer involucre entirely leafy and large, or smaller and produced into a leafy appendage.

* *Outer involucre-bracts large and leafy, entirely concealing the inner ones* (Hololepis, DC.).

Leaves broadly oval, almost sessile, rather glabrous; flower-heads peduncled, corymbose, ... *V. calycina.*

* * *Outer involucre-bracts scarious, produced at the tips into a foliaceous linear appendage.* (Stengelia.)

Shortly and thinly pubescent; leaves petioled; flower-heads corymbose; pappus rufescent, ... *V. anthelminthica.*

1. V. CINEREA, Less. in Linn. 1829, 291 and 1831. 673; DC. Prod. V. 24; Bth. Fl. Austr. IX. 459; Clark. Comp. Ind. 20. (*Conyza cinerea*, L. sp. pl. 1208; *Serratula cinerea*, Roxb. Fl. Ind. III. 406; *V. abbreviata*, DC. Prod. V. 25; *V. physalifolia*, DC. l. c. 24; *V. laxiflora*, Less. in Linn. 1831. 646; DC. Prod. V. 25; *Chrysocoma purpurea*, G. Forst. Prod. 54).

HAB. Common, not only in all leaf-shedding forests but still more so in all cultivated and waste lands, along river-banks, on old pagodas, etc., all over Burma, down to Tenasserim, up to 4000 ft. elevation; Andamans, introduced and now common..—Fl. Fr. C. S.

2. V. CHINENSIS, Less. in Linn. 1831. 674; Miq. Fl. Ind. Bat. II. 18; Bth. Fl. Hongk. 169; Clark. Comp. Ind. 18. (*Conyza Chinensis*, Lamk. Dict. II. 83, non L.; *Cyanopis pubescens*, Bl. Bydr. 890; DC. Prod. V. 69; *Cyanopis villosa*, DC. Prod. V. 69).

HAB. Frequent, especially in rubbishy and waste places in and around villages, along river-banks, etc., of the cultivated plains, less so in open places of the mixed forests, all over Pegu, Arracan, Martaban, and Tenasserim —Fl. Aug.—Jan.; Fr. CS.

3. V. BRACTEOLATA, DC. Prod. V. 62. (*V. subsessilis*, DC. Prod. V. 62; Clark. Comp. Ind. 10).

Var. *α.* BRACTEOLATA, Clark. Comp. Ind. 10, leaves obovate to obovate-oblong, acute; pappus often darker rufescent.

Var. *β.* SUBSESSILIS, Clark. l. c., lower, the leaves linear to linear-oblanceolate, acuminate; pappus usually paler coloured.

HAB. Ava, Khakyen hills, east of Bhamo (J. Anderson).—Fl. Fr. CS.

4. V. BRACTEATA, Wall. Cat. 2921; Clark. Comp. Ind. 17. (*Decaneuron Silhetense*, DC. Prod. V. 67; Wight Icon. t. 1083).

HAB. Karenee hills (Revd. F. Mason).

5. V. ROXBURGHII, Less. in Linn. 1831. 674. (*Eupatorium asperum*, Roxb. Fl. Ind. III. 415; *V. aspera*, DC. Prod. V. 31, non Ham.; Clark. Comp. Ind. 17).

HAB. Ava, apparently frequent about Bhamo and the hills east of it. —Fl. CS.; Fr. C. and HS.

6. V. SQUARROSA, Less. in Linnæa 1831. 627, note of p. 678. (*V. teres*, Wall. Cat. 2926; DC. Prod. V. 15; Clark. Comp. Ind. 16; *Acilepis squarrosa*, Don Prod. Nep. 169; *V. rigiophylla*, DC. Prod. V. 15).

HAB. Frequent in the eng and dry forests of Pegu, Prome, and Ava. —Fl. CS.; Fr. HS.

Lessing called two different plants by the above name, but according to the laws of priority Don's name has precedence, and the Brazilian plant must be called either *V. rubricaulis*, Less. or *V. plantaginoides*, Less., two names for the same plant published two years previously to Lessing's Brazilian *V. squarrosa*.

7. V. ASPERA, Ham. in Trans. Linn. Soc. XIV (1825) 219, vix Less., nec DC. Clark. etc. (*V. multiflora*, Less. in Linn. 1831. 642 ; DC. Prod. V. 31 ; *Decaneuron divergens*, DC. in Wight Contr. 8 and Prod. V. 68 ; Wight Icon. t. 1084 ; *V. divergens*, Clark. Comp. Ind. 64 ; *Eupatorium divergens*, Roxb. Fl. Ind. III. 415 and Icon. MS. XIII. t. 23).

Var. *β.* NILGHERRYENSIS, (*V. Nilgherryensis*, DC. Prod. V. 32 ; Wight Icon. t. 1078 ; *V. aspera*, Less. in Linn. 1831. 643 ?), more pubescent, the pappus white or nearly so.

HAB. Var. *α.* frequent in all leaf-shedding forests, along river-sides, etc. all over Burma, from Chittagong and Ava down to Tenasserim ; freely springing up in deserted toungyas and also in the savannahs.—Fl. CS. ; Fr. HS.

8. V. SALIGNA, DC. Prod. V. 33 ; Clark. Comp. Ind. 13. (*V. longicaulis*, DC. Prod. V. 33).

Var. *α.* GENUINA, corymbs more or less panicled ; involucre-bracts more acute to mucronate-acuminate, more glabrous.

Var. *β.* PEGUENSIS (*V. Peguensis*, Clark. Comp. Ind. 13), a shade-form, panicles spreading, terminal, leafless ; involucre-bracts more or less acute, usually more glabrous.

HAB. Var. *α.* Ava, Khakyen hills (J. Anderson) ; Chittagong, Seetakhund hill ; var. *β.* in the upper-mixed forests of the southern parts of the Pegu Yomah.—Fl. CS. ; Fr. C. and HS.

9. V. KINGII, Clark. Comp. Ind. 12.

HAB. Here and there in the tropical and moister upper-mixed forests of the southern slopes of the Pegu Yomah, and in those of Martaban east of Tounghoo ; also Ava, Khakyen hills (J. Anderson).—Fl. Fr. CS.

10. V. ATTENUATA, DC. Prod. V. 33 ; Clark. Comp. Ind. 12.

Var. *α.* GENUINA, flower-heads about half an inch across, longer or shorter peduncled and usually in the axils of the leaves.

Var. *β.* JUNCEA, judging from the material at hand, the whole plant seems to be transformed into an ample leafless panicle, the flower-heads only half the size, all sessile and solitary, in very elongate slender poor spikes ; achenes only a line long or somewhat longer, the pappus pale rufous.

HAB. Var. *α.* Upper Tenasserim, Moulmein (Falconer) ; var. *β.* adjoining Siamese province of Radburi (Teysmann).—Fl. Fr. CS. ; Fr. C. and HS.

Var. *β.* may form a distinct species, but there are no leaves.

11. V. BLANDA, DC. Prod. V. 32 ; Clark. Comp. Ind. 25. (*V. blandula*, Clark. Comp. Ind. 26 ; *V. Andersonii*, Clark. Comp. Ind. 27).

HAB. Rather frequent in the grass jungles along choungs and deserted toungyas of the Pegu Yomah and Martaban ; Upper Tenasserim.—Fl. Fr. Jan., Febr.

V. Andersonii (Birma. Griff. 3099) has the receptacle densely hirsute, but in *V. blanda*, as well as in *V. blandula*, the same is also hispid, although much less so.

12. V. SCANDENS, DC. Prod. V. 32 ; Clark. Comp. Ind. 26. (*Decaneuron obovatum*, DC. Prod. V. 67 ; Miq. Fl. Ind. Bat. II. 21 ; *V. vagans*, DC. Prod. V. 32 ; Clark. Comp. Ind. 26).

HAB. Pegu (R. Scott) ; Ava hills, up to 4000 ft. elevation.—Fl. Fr. CS.

13. V. VOLKAMERIÆFOLIA, DC. Prod. V. 32 ; Bedd. Fl. Sylv. Madr. t. 225. (*V. acuminata*, DC. Prod. V. 32, non Less. ; Clark. Comp. Ind. 22 ; *V. Punduana*, DC. Prod. V. 32 ; *V. cuspidata*, Buek Ind. Cand. II. p. V).

HAB. Not unfrequent in the drier hill and the hill-eng-forests of Martaban, at 2—4000 ft. elevation ; Ava, Khakyen hills (J. Anderson).—Fl. Febr., March ; Fr. April.

14. V. KURZII, Clark. Comp. Ind. 24.

HAB. Not unfrequent in the drier hill-forests of Martaban east of Tounghoo, at 2—3000 ft. elevation, often springing up amongst the shrubs of poonzohs.—Fl. March ; Fr. April.

15. V. ARBOREA, Ham. in Trans. XIV. (1825) 215 ; DC. Prod. V. 22 ; Clark. Comp. Ind. 23. (*V. Javanica*, DC. Prod. V. 22 ; *Eupatorium Javanicum*, Bl. Bydr. (1826) 903 ; *V. Blumeana*, DC. Prod. V. 22).

HAB. Tenasserim (Helf. 3103).

16. V. ELÆAGNIFOLIA, DC. Prod. V. 22 ; Clark. Comp. Ind. 24.

HAB. Upper Tenasserim, Moulmein. (Wall. ; Falc.) and adjoining Siamese provinces (Teysmann).—Fl. Jan., March ; Fr. HS.

17. V. CALYCINA, Wall. Cat. 2924 ; DC. Prod. V. 60 ; Clark. Comp. Ind. 9.

HAB. Prome (Wall.).

18. V. ANTHELMINTHICA, Willd. sp. pl. III. 1634 ; DC. Prod. V. 61 ; Clark. Comp. Ind. 10. (*Conyza anthelminthica*, L. sp. pl. 1207 ; *Serratula anthelminthica*, Roxb. Fl. Ind. III. 405).

HAB. Ava, Taongdong (Wall.).

Tricholepis, DC.

1. T. KARENSIUM, Kurz in Journ. As. Soc. Beng. 1872. 318 ; Clark. Comp. Ind. 238 (*Karensis*).

HAB. Martaban hills, Yoonzeleen (Brandis, O'Riley) ; Karenee hills (Rev. F. Mason).

Carthamus, L.

1. C. TINCTORIUS, L. sp. pl. 1162; Roxb. Fl. Ind. III. 409; Bot. Reg. t. 170; DC. Prod. VI. 612; Clark. Comp. Ind. 244.

HAB. Much cultivated in Prome District.—Fl. March, April.

There are two forms in cultivation, the one with almost entire leaves and involucral leaves and very slightly and shortly spiny, and the other, coming near *C. oxyacantha*, armed with long spreading spines.

Cnicus, L.

Conspectus of Species.

* *Corolla limb bell-shaped, 5-cleft to the middle. Flower-heads bisexual, the inner involucral bracts not in any way dilated at the tips, but terminating in spines.*

Leaves white-tomentose beneath, pinnatifid, spiny; flower-heads large, hemispherical, arachnoid-woolly, ... *C. eriophorus.*

* * *As preceding section, but the inner involucral bracts dilated into a terminal appendage.*

Slender but stiff; leaves narrow, entire or somewhat sinuate-lobed, shortly spiny, usually whitish tomentose beneath; flower-heads rather small, not leafy-involucred at the base, long-peduncled, ... *C. Chinensis.*

1. C. ERIOPHORUS, Hoffm. Deutsch Fl. 286; Roth Tent. Fl. germ. II. 286; Clark. Comp. Ind. 217, (*Cirsium eriophorum*, Scop. Flor. Carn. II. 130; DC. Prod. VI. 638; Koch Syn. Fl. Germ. 743; *Carduus eriophorus*, L. sp. pl. 1153; Jacq. Austr. t. 171; Engl. Bot. t. 386).

Var. *β.* INVOLUCRATUS, Clark. Comp. Ind. 217 (*Cirsium involucratum*, DC. Prod. VI. 639), leaves above covered with sharp sometimes spine-like bristles; involucre-bracts glabrescent; florets purple.

HAB. Var. *β.* Karenee country (O'Riley); Ava, Kakhyen hills east of Bhamo (J. Anderson).—Fl. August, September.

2. C. CHINENSIS, Clark. Comp. Ind. 219. (*Sinensis*). (*Cirsium Chinense*, Gard. and Champ. in Hook. Kew. Journ. Bot. I. 323; Bth. Fl. Hongk. 168).

HAB. Ava, hills east of Bhamo.

Saussurea, DC.

Conspectus of Species.

Leaves lyrate with a deltoid or hastate end-lobe, the upper cauline ones often entire or lobed, tomentose beneath; flower-heads long-peduncled, laxly racemose and panicled, the involucre-bracts nigrescent, often blunt and erose-toothed, *S. deltoidea.*

Leaves pinnatifid, also the cauline ones, the end-lobe rather elongate, tomentose beneath; flower-heads shortly peduncled or almost sessile, clustered and forming an elongate contracted almost raceme-like panicle, the involucre-bracts greyish villous, acute, ... *S. Peguensis.*

1. S. DELTOIDEA, Clark. Comp. Ind. 235 (*Aplotaxis deltoidea*, DC. Prod. VI. 541; *Aplotaxis nivea*, DC. Prod. VI. 541.)

Var. *α.* VERA, Clark. Comp. Ind. 236 (incl. var. *β. nivea*, Clark. l. c.), flower-heads long-peduncled, laxly racemose, larger, the involucre-bracts nearly entire at the tips; upper leaves entire or the end-lobe deltoid and large.

Var. *β.* POLYCEPHALA, Clark. Comp. Ind. 236, flower-heads smaller, shorter peduncled, and more crowded, laxly racemose and panicled, the involucre-bracts blunt and erose-toothed; upper leaves or their end-lobe sagittate.

HAB. Var. *α.* Martaban on the Nattoung hill (Rev. F. Mason); var. *β.* frequent in open and grassy places in the drier hill-, especially the pine-forests on the highest ridges of the Martaban hills, at 6000—7100 ft. elevation.—Fr. March.

2. S. PEGUENSIS, Clark. Comp. Ind. 235.

HAB. Karen hills (O'Riley).

Dicoma, Cass.

1. D. TOMENTOSA, Cass. Bull. phil. 1818.; Dict. XIII. 195 and XLVII. 503; DC. Prod. VII. 36; Clark. Comp. Ind. 36.—(*D. lanuginosa*, DC. Prod. VII. 36; Wight Icon. t. 1140).

HAB. Ava, limestone-hills about Segain (Wall.).—Fl. Fr. Nov.

N. B. *Hochstetteria Schimperi*, Clark. Comp. Ind. 246, non DC. = *Pegolettia Senegalensis*, Cass. I cannot see in what *Hochstetteria* and *Pegolettia* do differ, and still less can I understand how they can be placed almost at the opposite ends of the order, considering that two of the *Pegolettias* have the corolla even more bilabiate than are those of *Hochstetteria Schimperi*, as figured by A. Pyr. De Candolle.

Leucomeris, Don.

Conspectus of Species.

Flower-heads on short slender peduncles or almost sessile, in peduncled corymbs from the axils of the upper-leaves and terminal; leaves almost coriaceous, white-tomentose beneath, ... *L. spectabilis.*

Flower-heads solitary, in dense terminal umbel-like corymbs, the involucral bracts gradually shorter and passing into the thick short densely imbricate-bracted peduncle; leaves membranous, glabrous, ... *L. decora*

1. L. DECORA, Kurz in Journ. As. Soc. Beng. 1872. 317; Clark. Comp. Ind. 245.

HAB. Not unfrequent in the eng- and dry forests of the Prome District.—Fl. March; Fr. May.

Ainsliæa, DC.

Conspectus of Species.

× Leaves narrowed at the base and decurrent wing-like on the petiole.

Sparingly pilose, the flowering stems more or less sessile-leaved; leaves membranous obscurely crenate-toothed; flower-heads sessile or peduncled, in lax spikes or diffuse narrow panicles, ... *A. pteropoda.*

× × Leaves more or less cordate at the base, the petiole not winged.

Flowering stem leaved, the leaves thin membranous, sinuate-toothed, long-petioled, sparingly pilose or almost glabrous; flower-heads sessile, or peduncled, in racemes or panicles, ... *A. aptera.*

Flowering stem radical and almost scapiform and leafless; leaves almost coriaceous, entire, hirsute, often glabrescent above, densely villous-fringed; flower-heads peduncled, in diffuse panicles, ... *A. Brandisiana.*

1. A. PTEROPODA, DC. Prod. VII. 14; Clark. Comp. Ind. 246.

Var. α. GENUINA (*A. pteropoda β. lobelioides*, Clark. Comp. Ind. 246; *A. pteropoda*, DC. l. c.; *A. Silhetensis*, Clark. in Linn. Journ. XIV. 411), flower-heads sessile, usually clustered, forming a simple elongate lax spike.

Var. β. EFFUSA, Clark. l. c., flower-heads slenderly peduncled, almost racemose, forming a spreading narrow panicle.

HAB. Var. α. frequent in open grassy places of the drier hill-, especially the pine-forests, and on the hill-pastures of the higher ridges of the Martaban hills, at 5000—7100 ft. elevation; Upper Tenasserim, top of Moolee (Rev. Parish).—Fl. Fr. March.

2. A. BRANDISIANA, Kurz in Journ. As. Soc. Beng. 1872. 318; Clark. Comp. Ind. 247.

HAB. Not unfrequent along choungs in the damp hill-forests of the Martaban hills, at 2000—4000 ft. elevation.—Fl. March.

Gerbera, Gron.

1. G. PILOSELLOIDES, Cass. Dict. XVIII. 461; DC. Prod. VII. 16; Bth. Fl. Hongk. 191. (*Arnica piloselloides*, Linn. Amoen. VI. 103; *G. ovalifolia*, DC. Prod. VII. 17; Clark. Comp. Ind. 249).

HAB. Karenee hills (Rev. F. Mason.)

The Cape-plant grows on sand-hills and has larger flower-heads and shorter, more robust scapes.

Cichorium, L.

*1. C. INTYBUS, L. sp. pl. 1142; Engl. Bot. t. 539; DC. Prod. VII. 84; Koch Syn. Fl. Germ. 357; Clark. Comp. Ind. 250.

Var. α. GENUINA, floral leaves from a broader half-stem-clasping base, lanceolate, the lower leaves often runcinate.

Var. β. ENDIVIA, Clark. Comp. Ind. 250. (*C. Endivia*, L. sp. pl. 1142; DC. Prod. VII. 84; Koch Syn. Fl. Germ. 357), floral leaves broadly ovate, half-stem-clasping with a cordate base, the lower leaves usually only sinuate.

HAB. Var. β. cultivated in gardens of the drier parts of Burma, as Prome.—Fl. CS.

Crepis, L.

1. C. JAPONICA, Bth. Fl. Hongk. 194. (*Prenanthes Japonica*, L. Mant. 107; Thbg. Fl. Jap. 302; *Youngia Japonica*, DC. Prod. VII. 194;

Prenanthes lyrata, Thbg. Fl. Jap. 303 ; *Crepis lyrata*, Clark. Comp. Ind. 253 ; *Youngia Mauritiana*, DC. Prod. VII. 192 ; *Prenanthes procumbens*, Roxb. Fl. Ind. III. 404 : *Youngia Thunbergiana*, DC. Prod. VII. 192 ; *Youngia runcinata*, DC. Prod. VII. 192 ; *Youngia napifolia*, DC. Prod. VII. 193 ; Wight Icon. t. 1147 ; *Youngia ambigua*, DC. Prod. VII. 193 ; *Youngia Poosia*, DC. Prod. VII. 193 ; *Youngia striata*, DC. Prod. VII. 193 ; *Prenanthes striata*, Bl. Bydr. 835).

Hab. Frequent in garden-land and in toungyas under cultivation, in betel-nut-gardens, &c., of the Martaban hills ; also Ava-hills, apparently frequent.—Fl. Fr. Jan.—March.

Hieracium, L.

1. H. Silthetense, DC. Prod. VII. 218 ; Clark. in Journ. Linn. Soc. XIV. 411. and Comp. Ind. 257.

Hab. Tenasserim (Helf. 3369).

Lactuca, L.

Conspectus of Species.

Stout annual ; leaves runcinate and spinulose-toothed, half-stem-clasping with a sagittate base ; panicle large, furnished with auricled stem-clasping bracts ; flower-heads nearly ½ in. long, ... *L. Scariola.*

Slender annual ; leaves linear, entire or runcinately lobed, sessile with a sagittate base ; panicle lax and corymb-like, poor, the bracts subulate, small ; flower-heads rather broad, 3—3½ lin. long, ... *L. polycephala.*

1. L. Scariola, L. sp. pl. 1119 ; DC. Prod. VII. 137 ; Hayn. Arzn. Gew. I. t. 46 ; Koch Syn. Fl. Germ. 369 ; Clark. Comp. Ind. 263.

Var. *α.* genuina, panicle pyramidal.

*Var. *β.* sativa, Clark. Comp. Ind. 263 (*L. sativa*, L. sp. pl. 1118 ; DC. Prod. VII. 138 ; Hayn. Arzn. Gew. V. t. 30 ; Koch Syn. Fl. Germ. 369), panicle fastigiate.

Hab. Cultivated in the drier parts of Burma, as in Prome.—Fl. CS. ; Fr. HS.

2. L. polycephala, Bth. Clark. Comp. Ind. 272. (*Ixeris polycephala*, Cass. Dict. XXIV. 50 ; DC. Prod. VII, 151 ; *Ixeris fontinalis*, DC. l. c.)

Hab. Ava, Tapan near Bhamo (J. Anderson).—Fr. Feb.

N. B. *Lactuca bialata*, Griff. Not. Dicot. 1854. 247, = *L. brevirostris*, Champ. (1852).

Prenanthes, L.

Conspectus of Species.

× Leaves pinnatifid to pinnate.

Annual, almost glabrous ; panicle lax and spreading, ... *P. Khasiana.*

× × Leaves simple.

Leaves sagittate, the petiole long and broadly leafy-winged and sagittately or auricular-dilated at the base; panicle lax, the flower-heads nearly ½ in. long, nodding, on slender bracted peduncles, .. *P. alata.*

Leaves, at least the cauline ones, sessile with a sagittate base; flower-heads long and slenderly peduncled, forming a narrow terminal panicle, ... *P. Hothæ.*

1. P. ALATA, Hf. and Thoms.; Clark. Comp. Ind. 274.

HAB. Grassy open places in the drier hill-forests of the higher ridges of the Martaban hills, at 5—6000 ft. elevation.

2. P. HOTHÆ, (*Sonchus Hotha*, Clark. Comp. Ind. 276).

HAB. Ava, Khakyen hills east of Bhamo (J. Anderson).—Fl. Fr. Aug.

The base of the involucral bracts becomes slightly thickened and indurated in fruit, but the inflorescence and the narrow few- and apparently purple-flowered flower-heads are those of a *Prenanthes*, not of *Sonchus*.

Sonchus, L.

Conspectus of Species.

* *Involucral bracts glabrous or puberulous, but not glandular-pilose or hispid.*

Achenes much compressed, 3-ribbed on both sides, the ribs perfectly or almost perfectly smooth; leaves usually runcinnate-pinnatifid, ... *S. asper.*

Achenes compressed, the ribs marked with transverse asperities, and muricate; leaves runcinnate-pinnatifid or simple, ... *S. oleraceus.*

* * *Involucral bracts and peduncles glandular-hispid or glandular-pilose.*

Achenes hardly compressed, the ribs thick and transversely muricate; leaves more or less slightly runcinnate, the upper ones simple, ... *S. arvensis.*

1. S. OLERACEUS, L. sp. pl. 1116; Roxb. Fl. Ind. III. 402; Hayn. Arzn. Gew. II. t. 48; Fl. Dan. t. 682; Koch Syn. Fl. Germ. 371; Clark. Comp. Ind. 275. (*S. ciliatus*, Lamk. Fl. Franc. II. 87; DC. Prod. VII. 185; Wight Icon. t. 1141; *S. Wallichianus*, DC. Prod. VII. 185).

HAB. Ava.—Fr. June.

2. S. ASPER, Vill. Delph. III. 158; Hayn. Arzn. Gew. II. t. 48; Koch Syn. Fl. Germ. 371; Clark. Comp. Ind. 275. (*S. fallax*, Wallr. Sched. 432; Fl. Dan. t. 893; DC. Prod. VII. 185).

HAB. Burma (*teste* Clarke).

3. S. ARVENSIS, L. sp. pl. 1116; Engl. Bot. t. 674; DC. Prod. VII. 187; Koch Syn. Fl. Germ. 371; Clark. Comp. Ind. 276. (*S. Orixensis*, Roxb. Fl. Ind. III. 402; *S. Wightianus*, DC. Prod. VII. 187; Wight Icon. t. 1142).

HAB. Not unfrequent in cultivated and rubbishy places, in toungyas and betel-nut-gardens, etc., also along river-banks, of the Martaban hills; Ava, Bhamo (J. Anderson).—Fl. April, May; Fr. June.

Microrhynchus, Less.

Conspectus of Species.

Leaves narrow, slightly-lobed or entire; flowering stems erect; achenes strongly 4—5 ribbed, the ribs smooth, ... *M. acaulis.*

Leaves pinnatifid with the lobes all rounded; flowering stems divaricate and much dichotomously branched; achenes strongly 10—12-ribbed, the ribs transversely wrinkled, ... *M. asplenifolius.*

1. M. ACAULIS (*Prenanthes acaulis*, Roxb. Fl. Ind. III. 403; *Youngia acaulis*, DC. Prod. VII. 193; *Prenanthes* sp. Griff. Not. Dicot. 251. t. 469; *M. glaber*, Wight Icon. t. 1145; *Lactuca glabra*, DC. in Wight Contr. 26 and Prodr. VII. 135; Clark. Comp. Ind. 272).

HAB. Frequent in savannahs and other grassy places, along and in the bed of stony choungs, etc., all over Burma, from Ava and Martaban down to Tenasserim.—Fl. March, April; Fr. April, May.

2. M. ASPLENIFOLIUS, DC. Prod. VII. 181; Clark. Comp. Ind. 276. (*Prenanthes asplenifolia*, Roxb. Fl. Ind. III. 404).

HAB. Not unfrequent on dried up beds of the Irrawadi and in fields in Pegu.—Fl. Jan.

De Candolle cites *Hieracium dichotomum*, Roxb. Fl. Ind. III. 404; there is no such name in Roxburgh's book, and *Prenanthes asplenifolia* was no doubt meant.

CAMPANULACEÆ.

Conspectus of Genera.

Subord. 1. *CAMPANULEÆ.* Corolla regular, more or less bell-shaped to almost rotate. Anthers free. Ovary 2—3—5-celled.

* *Capsule opening by an apical opercle-like disk.*

SPHENOCLEA. Stigma shortly 3-lobed. Ovary 2-celled.—Glaucous herbs. Flowers in dense spikes.

* * *Capsule dehiscing by pores or valves.*

× Stigma lobed.

\+ Fruit a capsule. Corolla bell-shaped.

WAHLENBERGIA. Capsule dehiscing by 3—5 apical valves bearing the septa. Herbs.

CAMPANULA. Capsule opening laterally by 3 or 5 pores.

\+ \+ Fruit a berry.

CAMPANUMŒA. Corolla bell-shaped. Berry supported by the adherent large calyx-lobes.—Twining herbs, the juice milky. Flowers yellowish.

CYCLODON. Corolla shallowly bell-shaped. Calyx-lobes linear, entire or laciniate, adnate to the base of the ovary or free. Erect annuals, the juice milky. Flowers small, white.

PENTAPHRAGMA. Corolla persistent, the tube short. Stigma shortly 3-lobed. Calyx-lobes broad and blunt. Succulent herbs. Flowers in one-sided bracted racemes.

× × Stigma capitate.

Cephalostigma. Corolla almost rotate, deeply cleft, the lobes linear. Capsule dry. Delicate herbs.

Subord. 2. *LOBELIEÆ.* Corolla irregular, usually more or less slit on the back. Anthers united round the style. Ovary 2-celled.

* *Anthers united round the style. Ovary* 2*-celled. (Eu-Lobelieae).*

Pratia. Berry indehiscent. The 2 upper anthers terminated by a single bristle. Herbs.

Lobelia. Capsule herbaceous or membranous, dehiscent. The upper 2, or all the anthers bearded. Small or tall herbs.

* * *Anthers free. Ovary* 1 *or* 2*-celled.* (*Goodeniaceae*).

Scævola. Corolla 1- or 2-lipped, posteriorly split to the base. Soft-wooded trees or shrubs.

Sphenoclea, Gærtn.

1. S. Zeylanica, Gærtn. Fruct. I. 183. t. 24; Roxb. Fl. Ind. ed. Wall. II. 106; Miq. Fl. Ind. Bat. II. 569.—(*Sph. Pongatium*, DC. Prod. VII. 548; Wight Ill. t. 138; *Sph.* sp. Griff. Not. Dicot. 276).

Hab. Frequent in agrarian lands, especially in wet fields, along river-banks, etc., all over Burma.—Fl. Fr. C. and HS.

Wahlenbergia, Schrad.

1. W. gracilis, DC. Prod. VII. 433; Bth. Fl. Austr. IV. 137; Smith Exot. Bot. t. 45; Bot. Mag. t. 691.—(*W. agrestis*, DC. l. c. 434; Wight Icon. t. 1175; Hf. and Th. in Linn. Proc. II. 21, cum syn.; *Campanula dehiscens*, Roxb. Fl. Ind. ed. Wall. II. 96; *Campanula agrestis*, Wall. in Roxb. Fl. Ind. II. 97).

Hab. Not unfrequent in fallow agrarian lands of the Prome and Irrawaddi Districts.—Fr. April.

Campanula, Fuchs.

1. C. canescens, Wall. Cat. 1289; DC. Prod. VII. 473. *(Cephalostigma spathulatum*, Thwait. Ceyl. Pl. 422).

Hab. Frequent on brick-work of old pagodas, on rock-walls, &c., of the dry and eng forests of Prome, Pegu, and Martaban.—Fl. Febr.—April.

Campanumœa, Bl.

1. C. Javanica, Bl. Bydr. 726; Hf. and Th. in Linn. Proc. II. 9. *(Codonopsis Javanica*, Hf. and Th. in Ill. Him. Plant. t. 16. B; *Codonopsis cordata*, Hassk. Retz. I. 9; Miq. Fl. Ind. Bat. II. 566, var. fol. subt. sparse hirsutis).

Hab. Martaban, Karen hills (O'Riley).

Cyclocodon, Griff.

Conspectus of Species.

Calyx-segments removed from the ovary by means of the ovary-stalk, *C. parviflorum.*
Calyx-segments halfway adnate to the sessile ovary, ... *C. lancifolium.*

1. C. LANCIFOLIUM, Kurz in Flora 1872. 303. *(Campanula lancifolia*, Roxb. Fl. Ind. ed. Wall. II. 96 ; *C. truncatum*, Hf. and Th. in Linn. Proc. II. 18 ; *Codonopsis truncata*, Wall. Cat. 1301 ; DC. Prod. VII. 423 ; *Codonopsis albiflora*, Griff. Not. Dicot. 279 ; *C. distans*, Griff. Icon. Dicot. t. 481 ; *Codonopsis leucocarpa*, Miq. Fl. Ind. Bat. II. 565).

HAB. Not unfrequent on shady moist rock-walls along choungs, in the tropical forests of the Pegu Yomah, Martaban, and Chittagong down to Tenasserim, up to 3000 ft. elevation ; also Ava, Pingee rocks in the Irrawaddi, just above the images (Wall.).—Fl. Fr. Febr., March.

Pentaphragma, Wall.

1. P. BEGONIÆFOLIUM, Wall. Cat. 1313 ; DC. Prod. VII. 495. *(Phyteuma begonifolium*, Roxb. Fl. Ind. ed. Wall. II. 108 ; Jack in Mal. Misc. in Hook. Bot. Misc. I. 277. t. 57).

HAB. Tenasserim, Mergui (Griff.).

Cephalostigma, A. DC.

1. C. PANICULATUM, A. DC. Prod. VII. 421.

HAB. Common on laterite and calcareous grounds in the eng and dry forests all over Prome, Pegu, and Martaban.—Fl. Decb.—Febr. ; Fr. Jan. —March.

N. B.—*Wahlenbergia perotifolia*, WA., Wight Icon. t. 842, appears to me to belong to *C. hirsutum*, not to the above, as Hooker and Thomson state.

Pratia, Gaud.

1. P. NUMMULARIA, Bth. *(Lobelia nummularia*, Lamk. Dict. III. 589 ; *Piddingtonia nummularia*, DC. Prod. VII. 341 ; *Lobelia begonifolia*, Wall. in Asiat. Res. XIII. 377 ; Roxb. Fl. Ind. ed. Wall. II. 115 ; *Pratia begonifolia*, Lindl. Bot. Reg. t. 1373).

HAB. Martaban hills, Yoonzeleen plateau, at 2500 ft. elevation (Dr. Brandis).

Lobelia, L.

Conspectus of Species.

* *Small erect procumbent or creeping herbs. Flowers solitary or in spurious racemes, small, 1—4 lin. long.*

× Stems terete.

Calyx puberulous ; flowers solitary, axillary, ... *L. Zeylanica.*

× × Stems angular.

Stems 3-gonous ; calyx quite glabrous ; flowers solitary and axillary, or more usually in spurious racemes, ... *L. trigona.*

Stems 4-gonous ; flowers in poor racemes ; calyx small, ... *L. Griffithii.*

* * *Robust erect simple or branched herbs, 2—5 ft. high. Flowers* $\frac{3}{4}$*—1 in. long, in leafy-bracted terminal simple or panicled racemes.*

All parts, also the white corolla, quite glabrous; capsule glabrous, ...*L. Wallichiana.*
All parts, also the rose-coloured corolla and the capsule, velvety puberulous, ..*L. rosea.*

1. L. ZEYLANICA, L. sp. pl. ed. 1. 932; Wall. in Roxb. Fl. Ind. II. 113.

Var. *α.* GENUINA, (*L. Lobbiana*, Hf. and Th. in Linn. Proc. II. 28), an aquatic form, the branches more or less ascending or erect, up to $1\frac{1}{2}$ ft. long; all parts more robust; leaves up to 2 in. long; corolla 4—5 lin. long.

Var. *β.* AFFINIS, (*L. affinis*, Wall. Cat. 1311; DC. Prod. VII. 360; *L. succulenta*, Bl. Bydr. 728; DC. l. c. 373), creeping or prostrate, all parts smaller; leaves shorter petioled, $\frac{1}{2}$—1 in. long; corolla only 2 lin. long.

HAB. Var. *α* only, frequent along choungs in the tropical forests of the eastern slopes of the Pegu Yomah and from Martaban down to Tenasserim.—Fl. Fr. Febr., March.

2. L. TRIGONA, Roxb. Fl. Ind. ed. Wall. II. 111. (*L. subincisa*, Wall. Cat. 1310; DC. Prod. VII. 367; *L. subracemosa*, Miq. in Fl. Ind. Bat. II. 576).

Var. *α.* TRIGONA, (*L. trigona*, Roxb. l. c. etc.), all parts more succulent, the floral leaves more ovate; peduncles thicker and flowers much larger.

? Var. *β.* STIPULARIS (*L. stipularis*, Wall. Pl. As. rar. II. 43; *L. trialata*, Ham. in Don Prod. Fl. Nep. 157; DC. Prod. VII. 360; *L. micrantha*, Hook. Exot. Fl. I. t. 44 ?) slender, erect, branched, all parts less succulent; peduncles filiform; flowers minute, the floral bracts often very narrow. Probably a distinct species.

HAB. Frequent in swampy grass-land, borders of tanks, in wet paddy fields, and more especially on the banks of rivers, all over Burma; var. *β.* is a hill-form (or species ?) of Martaban; also Prome, and Ava, on Taongdong.—Fl. Fr. Octob.—Dec.

Vatke (in Linnæa XXXVI. 718) identifies *L. trigona* of Roxburgh with *L. alsinoides* of Lamarck; the description of the latter, however, does not in the least agree with the Indian plant. *L. stipularis*, Wall., will take precedence, if it is not specifically different, but I am at present inclined to believe it may be different.

3. L. GRIFFITHII, Hf. and Th. in Linn. Proc. II. 28.

Var. *α.* GENUINA, leaves reduced to scales; flowers only a line long.

Var. *β.* DOPATRIOIDES, Kurz in Flora 1872. 302 (*L. dopatrioides*, Kurz in Journ. As. Soc. Beng. 1870. 77; *L.* sp. Griff. Not. Dicot. 281), leaves developed; flowers nearly twice the size.

HAB. In wet fields and swampy pastures of Pegu, near Rangoon (R. Scott); var. *β.* in long grass along rivers of Arracan, frequent; Tenasserim, Attaran (Brandis); Mergui (Griff.).—Fl. Fr. Octob.

4. L. WALLICHIANA, Hf. and Th. in Linn. Proc. II. 29 (*L. pyramidalis* var. *β.* DC. Prod. VII. 381).

Hab. Rare on wet sandstone-walls in the tropical forests of the Pegu Yomah; more frequent in the damp hill-forests and in open hill-pastures of the Martaban hills east of Tounghoo, also Ava, Khakyen hills.—Fl. Jan. —March; Fr. March, April.

5. L. rosea, Wall. in Roxb. Fl. Ind. ed. Wall. II. 115 and Plant. As. rar. II. 42. t. 152; DC. Prod. VII. 381. (*L. trichandra*, Wight Icon. t. 1171).

Hab. Martaban, Karennee hills (Revd. F. Mason); Ava, Khakyen hills (J. Anderson).—Fl. March.

Scævola, L.

Conspectus of Species.

Glabrous or silky-hairy, long silky villous in the leaf-axils; berries velvety or pubescent, ... *S. sericea.*

Glabrous, not or slightly silky-villous in the leaf-axils; berries glabrous, .. *S. Kœnigii.*

1. S. Kœnigii, Vhl. Symb. III. 36; DC. Prod. VII. 505; Bot. Mag. t. 2732; Bth. Fl. Austr. IV. 86.—(*S. Taccada*, Roxb. Fl. Ind. ed. Wall. II. 146; Wight Ill. t. 137; Griff. Not. Dicot. 275).

Hab. Frequent along the sea-coast, especially on coral-banks and beaches, of Tenasserim and the Andamans.

STYLIDIEÆ.

Stylidium, Swartz.

Conspectus of Species.

Leaves palmatinerved, almost rosulate, the stems terete; flowers white, in dichotomous leafless or few-leaved radical glandular-puberulous spikes or panicles, .. *S. uliginosum.*

Leaves 1-nerved, scattered, the stems angular; flowers rose-coloured, in a simple stiff glabrous spike, ... *S. roseum.*

1. S. uliginosum, Swartz in Magaz. Nat. Gesch. Berl. 1807. 52. t. 2. f. 4; DC. Prod. VII. 336; Kurz in Flora 1872. 303.—(*S. Kunthii*, Wall. Cat. 3759; DC. Prod. VII. 335; *S. Brunonis*, Griff. Not. Dicot. 275; *S. tenellum*, Swartz Magaz. Naturf. Ges. Berl. 1807. 51. t. 2. f. 3; DC Prod. VII. 336, a reduced state).

Hab. Frequent in swampy grass-lands, swamps, etc., of the alluvial and diluvial plains of Pegu; also Chittagong and Martaban down to Tenasserim as far south as Mergui.—Fl. Sept.—Nov.; Fr. Nov., Dec.

2. S. roseum, Kurz in Journ. As. Soc. Beng. 1876. 137.—(*S. tenellum*, Kurz in Flora 1872. 304, non Sw.).

Hab. Swampy grass-land of Chittagong, rare.—Fl. Octob.

VACCINIACEÆ.

Conspectus of Genera.

* *Calyx jointed with the pedicel.*

Vaccinium. Calyx terete. Corolla various, from large and tubular and bell-shaped to small and urn-shaped. Anthers 8 or 10, the tubes short or long.

* * *Calyx continuous with the pedicel.*

Pentapterygium. Calyx 5-winged. Rest as in *Vaccinium*.

Vaccinium, L.

Conspectus of Species.

Subg. 1. *Agapetes*, Don. Flowers large, rarely small; pedicels more than an inch long, thickened upwards and often cup-shaped-dilated at the apex. Epiphytical shrubs.

* *Corolla large, ½—2½ in. long, tubular to bell-shaped, slightly curved or straight.*

O Filaments more than ½ in. long.

Anthers short, connate; corolla tubular, slightly curved; racemes glabrous, .. *V. macrostemon.*

O O Filaments thick and short, only 1—2 lin. long.

× Calyx and pedicels glandular-hirsute.

Corolla glabrous, tubular or campanulate-tubular; anthers without bristles between the tubes, ... *V. verticillatum.*

× × Calyx and pedicels quite glabrous.

\+ Anthers without a pair of reflexed or uncinate bristles between their tubes.

Anthers exserted; nerves of leaves uniting into a marginal nerve; corolla 2 in. long or longer, ... *V. variegatum.*

As preceding, but corolla only ½ the size, scarlet, ... *V. Roylei.*

Anthers included; nerves of leaves not uniting within the margin, ... *V. miniatum.*

\+ \+ Anthers with a pair of bristles between their tubes at the base or halfway up.

Corolla tubular bell-shaped; calyx-toothed, the teeth subulate-lanceolate, .. *V. odontocerum.*

Corolla bell-shaped, wide; calyx-limb cupular, with sinuate acute teeth, .. *V. campanulatum.*

* * *Flowers rather small or small, ½ in. to 2 lin. only long, shortly or elongate-urn-shaped.* (*Corallobotrys*, Hf.).

Corolla ½ in. long, elongate-urceolate; flowers in peduncled terminal racemes, .. *V. auriculatum.*

Corolla 2 lin. long, urn-shaped; flowers in short umbel-like racemes arising laterally from the branches, ... *V. acuminatum.*

Subg. 2. *Epigynium*, Klotsch. Flowers small, urn-shaped or urceolate-campanulate; pedicels short, slender, not or only at the very joint thickened. Racemes one-sided. Berries globose.

* *Epiphytical shrub. Bracts deciduous.*

Branchlets pubescent; corolla villous inside at the mouth; anthers with 2 bristles at the tubes, ... *V. pumilum.*

* * *Terrestrial shrubs or trees. Bracts deciduous.*

All parts, also the pedicels, corolla, and calyx, glabrous, ... *V. Donianum.*

Young shoots and racemes (sometimes also the calyx) pubescent; corolla glabrous, .. *V. exaristatum.*

1. V. MACROSTEMON, Kurz in Journ. As. Soc. Beng. 1873. 85.

HAB. Not unfrequent in the hill-forests (especially the drier ones) of Martaban, at 4000 to 6000 ft. elevation.—Fl. March.

2. V. VERTICILLATUM, Kurz in Journ. As. Soc. Beng. 1873. 83, non Wight (*Agapetes verticillata*, D. Don Gen. Syst. III. 862; DC. Prod. VII. 554).

Var. α. GENUINUM, (*Thibaudia obliqua*, Griff. Icon. Dicot. t. 515), corolla only ¾ in. long ; flowers in shortly peduncled umbel-like-racemes.

Var. β. ELEGANS, but the flowers solitary or by 2—3 in the axils of the leaves ; leaves usually broader.

? Var. γ. GLANDIFLORUM, corolla 1½ in. long ; flowers in short-peduncled or sessile umbel-like racemes, occasionally also solitary.

HAB. Var. β. in the upper dry forests on the Kambala ridges of the Pegu Yomah, at 2800 to 3000 ft. elevation ; var. γ in the hill-forests of Martaban and Tenasserim as far south as Tavoy, at 4000 to 7000 ft. elevation.—Fl. March.

3. V. VARIEGATUM. Kurz in Journ. As. Soc. Beng. 1873. 84 (*Agapetes variegata*, Don Gen. Syst. III. 862 ; *Ceratostemma variegatum*, Roxb. Fl. Ind. II. 413 ; Griff. Icon. Dicot. t. 502 ; *Thibaudia macrantha*, Hook. Bot. Mag. t. 4566).

HAB. Moulmein, Kola mountains (Lobb).

4. V. ROYLEI (*Thibaudia variegata*, Royle Ill. Him. Pl. t. 79. f. 1 ; *V. variegatum* β. *parviflora*, Kurz in Journ. As. Soc. Beng. 1873. 84).

HAB. Frequent in the hill-forests of Martaban, at 3000 to 5000 ft. elevation.—Fl. March ; Fr. April.

5. V. MINIATUM, Kurz in Journ. As. Soc. Beng. 1873. 85. (*Ceratostemma miniatum*, Griff. Icon. Dicot. t. 504).

HAB. Burma, probably Ava (Griff. 3475).

6. V. ODONTOCERUM, Wight Icon. t. 1187 (*Ceratostemma angulatum*, Griff. Dicot. Icon. t. 503).

HAB. Ava, Patkaye ranges (Griff.).—Fl. March.

7. V. CAMPANULATUM, Kurz in Journ. As. Soc. Beng. 1873. 85.

HAB. In the stunted hill-forests on the top of Nattoung, Martaban hills, at about 7000 ft. elevation.—Fl. March.

8. V. AURICULATUM (*Thibaudia auriculata*, Griff. Dicot. Icon. t. 508).

HAB. In the hill-forests on the Taipo mountains, Martaban, above 4000 ft. elevation (Dr. Brandis).—Fl. March.

9. V. ACUMINATUM (*Agapetes acuminata*, D. Don Gen. Syst. III. 862 ; *Epigynium acuminatum*, Klotzsch in Linn. XXIV. 51 ; Bot. Mag. t. 5010 ; *Corallobotrys acuminata*, Hf. and Bth. Gen. pl. II. 575).

HAB. Burma, probably Moulmein hills (Griff. 3471).

10. V. PUMILUM, Kurz in Journ. As. Soc. Beng. 1873. 85.

? Var. β. CUNEATUM, leaves of thinner texture, obovate-cuneate to cuneate, rounded or blunt at the apex ; flowers longer pedicelled.

HAB. Epiphytic in the drier hill-forests of the Martaban hills east of Tounghoo, at 5000 to 6000 ft. elevation ; var. β. in the same forests on Taipo hill, at 4000 ft. elevation (Dr. Brandis).—Fl. March.

11. V. Donianum, Wight Icon. t. 1191 ; Walp. Ann. I. 478 (*Epigynium Donianum*, Klotzsch in Linn. XXIV. 51. ; *V. affine*, Wight Icon. t. 1190).

Var. *α.* genuinum, anthers with a pair of bristles between the tubes ; pedicels longer.

Var. *β.* exaristatum, anthers without bristles ; pedicels longer.

Hab. Frequent in the drier hill-, especially the pine-forests of the Martaban hills east of Tounghoo, at 3000 to 6000 ft. elevation.—Fl. Jan., Febr. ; Fr. March.

12. V. exaristatum, Kurz in Journ. As. Soc. Beng. 1873. 86.

Hab. Common in the drier hill-forests, especially the stunted ones, of Martaban, at 5000 to 6000 ft. elevation.—Fr. March.

Possibly only an exaristate form of *V. Leschenaultii*, Wight. *V. Malaccense*, one of this vicinity, differs in the puberulous corolla.

ERICACEÆ.

Conspectus of Genera.

Trib. 1. *ARBUTEÆ.* Corolla deciduous. Fruit a drupe or berry.

Pernettya. Corolla globular urn-shaped, the limb 5-toothed and reflexed. Stamens 10. Hypogynous scales 10, 3-lobed. Ovary 5-celled, the cells many-ovuled.

Trib. 2. *ERICEÆ.* Corolla deciduous or persistent. Fruit a capsule.

* *Capsule loculicidally* 5—6-*valved.* (Andromedeæ).

Gaultheria. Calyx 2-bracted at the base. Corolla urceolate, the revolute limb 5-cleft. Stamens 10 ; anthers 2-cleft, the cells terminating in 2 awns. Hypogynous scales 10, usually united at the base. Calyx fleshy or succulent in fruit.

Andromeda. Corolla globular to tubular-urn-shaped, the reflexed limb 5-toothed. Stamens 10, included ; anther-cells usually one-awned. Calyx open in bud, dry in fruit.

* * *Capsule dehiscing septicidally from the apex.* (Rhododendreae).

Rhododendron. Corolla funnel- or bell-shaped, 5-cleft. Stamens 5 or 10, declinate ; anthers opening by terminal pores. Capsule 5-celled.

Gaultheria, L.

1. G. punctata, Bl. Bydr. 856 ; Miq. Fl. Ind. Bat. II. 1055.

Var. *α.* Blumei, leaves linear-oblong to oblong, very shortly petioled or almost sessile. A shrub, glabrous, the branchlets triquetrous.

? Var. *β.* fragrantissima, (*G. fragrantissima*, Wall. in Asiat. Res. XIII. 207. c. icon. ; Wight Icon. t. 1196 ; Bot. Mag. t. 5984), leaves obovate to obovate oblong and oblong, longer (up to ⅔ in.) or shorter petioled. A small bushy tree or at high elevations reduced to a shrub of a few feet in height, the branchlets triquetrous.

? Var. *γ.* Leschenaultii, (*G. Leschenaultii*, DC. Prod. VII. 593 ; Wight Icon. t. 1195 and Illustr. t. 141. C. ; *Andromeda Kathagerensis*,

Hook. Icon. t. 246), branchlets more or less terete, covered with appressed blackish bristles; leaves often smaller, shortly petioled, the glands beneath often produced into appressed bristles. A shrub, large or often only ½ to a foot high.

Hab. Var. β. and γ. frequent in the drier hill-forests, especially the stunted ones, of the Martaban hills, at 6000 to 7000 ft. elevation.—Fl. Febr.; Fr. March.

The forms here brought together vary greatly in the length of the petiole, the pubescence of the corolla inside, size of plant, &c., and require further study.

Andromeda, L.

1. A. ovalifolia, Wall. Cat. 763 and in Asiat. Res. XIII. 391 cum icon.; Clegh. in Journ. Agr. Hort. Soc. Beng. XIV. 260. cum tab.; Wight Icon. t. 1199. (*Pieris ovalifolia*, Don. Gen. Syst. III. 832; DC. Prod. VII. 599; *A. lanceolata*, Wight Icon. t. 1198 ?).

Hab. Frequent in the drier hill-forests, especially the stunted ones and in the pine-forests, of Martaban, at 5000 to 7000 ft. elevation.—Fr. March.

Rhododendron, L.

Conspectus of Species.

* *Leaves shortly appressed tomentose or lepidote beneath. Calyx inconspicuous.*

Leaves beneath silvery and shortly tomentose beneath; ovary rusty puberulous; bracts of leaf-buds villous, ... *R. arboreum.*

Leaves beneath and ovary and style rusty lepidote; bracts of leaf-buds silky ciliate only, ... *R. formosum.*

* * *Leaves glabrous and smooth.*

Ovary and style quite glabrous; bracts of leaf-buds ciliolate, ... *R. Moulmeinense.*

1. R. arboreum, Sm. Exot. Fl. t. 6; Bot. Reg. t. 890, 1240 and 1982; DC. Prod. VII. 720; Hook. Exot. Fl. t. 168; Bot. Mag. t. 3290; Houtt. Fl. d. serr. IX. t. 945; Wight Icon. t. 1201; Bedd. Fl. Sylv. Madr. t. 228.

Hab. In the hill-forests of the Karenee country (Rev. F. Mason).

2. R. formosum, Wall. Pl. As. rar. III. 3. t. 207; DC. Prod. VII. 721; Bot. Mag. t. 4457.

Var. β. Veitchianum, (*R. Veitchianum*, Hook. Bot. Mag. t. 4992), flowers nearly twice the size; leaves not ciliate.

Hab. Martaban, not unfrequent on the top of Nattoung, at 7200 ft. elevation.—var. β. Moulmein hills.—Fl. March.

3. R. Moulmeinense, Hook. Bot. Mag. t. 4904.

Hab. Common in the hill-forests, especially the damper ones, from Martaban down to Tenasserim, at 4000 to 7000 ft. elevation.—Fl. March.

Near allied to *R. Javanicum*, from which it differs in its perfectly glabrous style and ovary and somewhat different nervation (the lateral nerves arising almost rectangularly from the midrib).

EPACRIDEÆ.

Leucopogon, R. Br.

1. L. Malayanus, Jack in Mal. Misc. I. No. 2 and in Hook. Bot. Misc. II. 71; Wall. in Roxb. Fl. Ind. II. 301; DC. Prod. VII. 744.

Var. *α.* genuina, leaves larger and broader, $1\frac{1}{2}$ to 2 in. long, acute and mucronate; spikes about $\frac{1}{2}$ in. long.

Var. *β.* Moluccanus, (*L. Moluccanus*, Scheff. Obs. phytog. 97). leaves $\frac{1}{2}$ to an in. long, $1\frac{1}{2}$ to $2\frac{1}{2}$ lin. broad, subulate-pointed; spikes only $1\frac{1}{2}$—2 lin. long.

Hab. Var. *α.* Burma, probably Tenasserim (Griff. 3453/1); var. *β.* Tenasserim (Helf. 3453).

PLUMBAGINEÆ.

Conspectus of Genera.

Trib. 1. *STATICEÆ.* Styles entirely, or at least at the summit free. Fruit an utricle bursting at the base or circumsciss at the top.

Ægialitis. Styles glabrous, free; stigmas capitate. Petals coriaceous, jointed beyond the connate base; fruit elongate, exserted; albumen none. Treelets.

Trib. 2. *PLUMBAGEÆ.* Styles entirely connate. Pericarp more or less dehiscing into 2 valves.

Plumbago. Calyx glandular-muricate. Fruit included in the calyx. Herbs.

Ægialitis, R. Br.

1. Æ. annulata, R. Br. Prod. Nov. Holl. I. 426; DC. Prod. XII. 621. (*Æg. rotundifolia*, Roxb. Fl. Ind. II. 111; Griff. Not. Dicot. 207. t. 461. f. 2).

Hab. Frequent in the littoral forests all along the shores from Chittagong down to Tenasserim and the Andamans.—Fl. Fr. CS.

Plumbago, L.

Conspectus of Species.

Spikes glandular-pubescent; corolla white; bract ovate, leafy; bractlets subulate, ..*P. Zeylanica.*

Spikes glabrous or nearly so; corolla rose-coloured or scarlet; bract ovate-oblong, scarious, brown; bractlets conform with the bracts, ...*P. rosea.*

1. P. Zeylanica, L. sp. pl. 215; Roxb. Fl. Ind. I. 463; DC. Prod. XII. 692.

Hab. In rubbishy places in and around villages, along river-banks and in toungyas, not unfrequent all over Burma, but apparently nowhere really wild.—Fl. Fr. ∞.

2. P. ROSEA, L. sp. pl. I. 215 ; Roxb. Fl. Ind. I. 463 ; Bot. Mag. t. 230 and t. 5363.—(*P. coccinea*, Boiss. in DC. Prod. XII. 693).

HAB. Not unfrequent in the moister mixed forests of the Pegu Yomah and the Martaban hills down to Tenasserim ; also Ava. Often cultivated and springing up in toungyas, along the river-banks, etc.—Fl. Fr. CS.

PLANTAGINEÆ.

Plantago, L.

1. P. MAJOR, L. sp. pl. 163 ; Engl. Bot. t. 1558 ; Flor. Dan. t. 461 ; DC. Prod. XIII/1, 694.

Var. *β.* ASIATICA, Dcne. in DC. Prod. XIII/1, 694 (*P. Asiatica*, L. sp. pl. 163 ; Wight Illustr. t. 177).

HAB. Ava, Khakyen hills (J. Anderson).

Endlicher places *Plantagineæ* near *Plumbagineæ*, and I believe this to be the true affinity, for, with the exception of the stamens being alternate with the petals, the characters are all reducible to the Plumbaginaceous type.

PRIMULACEÆ.

Conspectus of Genera.

Trib. 1. *PRIMULEÆ.* Capsule quite free (not adnate to the base of the calyx), dehiscing usually by longitudinal valves.

PRIMULA. Corolla salver- or funnel-shaped, furnished at the throat with 5 gibbose swellings. Capsule opening by 5-valves. Scapigerous annuals or perennials.

LYSIMACHIA. Corolla rotate or bell-shaped, with gibbose swellings at the throat. Capsule usually 5-valved. Erect or creeping simple or branched herbs. Flowers solitary and axillary, or in racemes or spikes.

Trib. 2. *ANAGALLIDEÆ.* Capsule quite free, circumsciss-dehiscing.

ANAGALLIS. Corolla rotate or bell-shaped. Herbs with alternate or opposite leaves.

Lysimachia, L.

Conspectus of Species.

* *Flowers solitary or by pairs in the leaf-axils.*

Glabrous ; stem erect, terete ; leaves linear ; flowers slenderly pedicelled, .. *L. linearifolia.*

Glabrous, erect, the stem 4-cornered ; flowers slenderly pedicelled ; leaves lanceolate, .. *L. pedunculuris.*

* * *Flowers in terminal racemes.*

× All parts glabrous.

Stamens shorter than the petals, narrowly bordered, ... *L. multiflora.*

Stamens exserted ; sepals broadly-white-bordered, ... *L. lobelioides.*

× × Stems and racemes (glandular ?) hairy.

Habit of *L. lobelioides*, corolla twice the length of the calyx, ... *L. Griffithiana.*

1. L. LINEARIFOLIA, Griff. in Journ. As. Soc. Beng. 1873. 86.

HAB. Burma, probably Ava (Griff. 3532).

2. L. PEDUNCULARIS, Wall. Cat 1489.

HAB. Ava, Taong-dong (Wall.) ; Tenasserim, Zwakabin (Rev. C. Parish).—Fl. Fr. Octob.

3. L. MULTIFLORA, Wall. Cat. 1487 ; DC. Prod. VIII. 63 ; Klatt, Gatt. Lysim. 14. t. 4.

HAB. Ava, near Bhamo (J. Anderson).—Fl. Febr.

4. L. LOBELIOIDES, Wall. in Roxb. Fl. Ind. II. 29 ; DC. Prod. VIII. 61 ; Bot. Reg. t. 6 ; Klatt, Gatt. Lysim. 16. t. 2.

HAB. Ava, Khakyen hills (J. Anderson).—Fl. May.

5. L. GRIFFITHIANA, Kurz in Journ. As. Soc. Beng. 1873. 86.

HAB. Ava, in fields towards Karmein.—Fl. April.

Apparently allied to the preceding species.

MYRSINEÆ.

Conspectus of Genera.

Subord. I. EU-MYRSINEÆ. Fruit an indehiscent berry or drupe. Seeds with albumen.

Trib. 1. *ARDISIEÆ.* Staminodes none. Anthers not transversely chambered. Ovary inferior to superior.

* *Ovary inferior or half-inferior. (Mæseæ).*

MÆSA. Corolla bell-shaped or nearly so, imbricate in bud. Calyx 2-bracted. Drupe crowned by the calyx-limb, globular. Erect shrubs or trees.

* * *Ovary superior. Drupes globular. (Ardisieæ).*

× Flowers pedicelled, clustered, lateral or axillary.

MYRSINE. Corolla gamo- or rarely poly-petalous, imbricate or valvate. Flowers often polygamously dicœcious. Ovules few. Erect trees or shrubs.

× × Flowers in racemes or panicles.

SAMARA. Corolla of 5 or 4 free petals imbricate in bud. Anthers as long as or shorter than the filaments. Ovules few. Climbers.

ARDISIA. Corolla gamopetalous, usually rotate, twisted in bud. Anthers longer than the filaments, free. Ovules numerous. Trees, shrubs, or undershrubs.

Trib. 2. *TEOPHRASTEÆ.* Staminodes 5, alternating with the stamens. (American).

JACQUINIA. Corolla rotate-bellshaped, deeply 5-cleft. Berry few-seeded.

Subord. II. ÆGICEREÆ. Fruit a dry cylindrical follicle-like drupe rupturing irregularly. Seeds elongate, germinating while still on the tree. Albumen none. Anther-cells many-chambered.

ÆGICERAS. Corolla twisted in bud. Filaments connate at the base. Flowers in umbels. Trees.

Mæsa, Forsk.

Conspectus of Species.

* *All parts, also the inflorescence, quite glabrous.*

× Inflorescence very short (hardly as long as the petioles).

Branchlets verrucose ; leaves minutely and remotely callus-toothed, . . *M. Andamanica.*

× × Inflorescence very much longer than the petioles.

† Leaves entire.

Racemes compound, shorter than the leaves, ... *M. ramentacea.*

† † Leaves coarsely serrate.

Racemes compound, shorter than the leaves; calyx only $\frac{1}{5}$ lin. long,..... *M. Indica.*

Racemes compound, very slender, as long as or longer than the leaves; calyx nearly a line long,..... *M. paniculata.*

* * *Inflorescence, and more or less also the sinuate-toothed leaves and softer parts, pubescent or otherwise hairy.*

Leaves softly pubescent, especially beneath; panicles or racemes dense, rusty pubescent, shorter than the petiole; bracts minute, ... *M. mollissima.*

Leaves glabrous, midrib beneath sparingly hairy; panicles densely rusty-hairy and mossy, much longer than the petioles; bracts about as long as the pedicels, .. *M. muscosa.*

1. M. Andamanica, Kurz For. Fl. Burm. II. 575. (*M. verrucosa*, Kurz For. Fl. Burm. II. 98, non Scheff.).

Hab. In the tropical forests of South Andaman.—Fl. May, June.

2. M. ramentacea, Roxb. Fl. Ind. I. 230; DC. Prod. VIII. 77; Miq. Fl. Ind. Bat. II. 1006; Scheff. Comment. Myrsin. 15. (*M. glabra*, Roxb. Fl. Ind. I. 560; *M. Sumatrana*, Scheff. l. c.).

Hab. Common in the tropical and moister mixed forests, all over Burma, from Chittagong and Ava down to Tenasserim and the Andamans, up to 2000 ft. elevation; freely springing up in deserted toungyas.—Fl. Jan.; Fr. March, April.

3. M. Indica, DC. in Linn. Trans. XVII. 134; DC. Prod. VIII. 80; Miq. Fl. Ind. Bat. II. 1008. (*Bæobotrys Indica*, Roxb. Fl. Ind. I. 557; Wight Icon. t. 1206).

Hab. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah and more so in those from Martaban down to Tenasserim up to 3000 ft. elevation; Chittagong; Ava, Khakyen hills.—Fl. March.

4. M. paniculata, A. DC. in Linn. Trans. XVII. 133 and Prod. VIII. 78. (*M. montana β. elongata*, DC. Prod. VIII. 79 ?).

Hab. Tenasserim (Helf. 3559); Tavoy (Wall.).—Fl. Dec.

5. M. mollissima, A. DC. Prod. VIII. 81. (*M. mollis*, A. DC. l. c. 82; *M. permollis*, Kurz in Journ. As. Soc. Beng. 1871. 66, forma latifolia).

Hab. Rather frequent in the tropical forests of the eastern slopes of the Pegu Yomah and more so from Martaban down to Upper Tenasserim, Thoungyeen (Brandis); Ava, Khakyen hills.—Fl. March, April.

6. M. muscosa, Kurz in Journ. As. Soc. Beng. 1873. 87.

Hab. Burma, probably Ava (Griff. 3556).

Myrsine, L.

Conspectus of Species.

* *Stigma 2—3-lobed, usually fringed.*

× Style longer or shorter. Leaves more or less serrate, especially towards the apex.

Pedicels slender and stiff, 3—5 lin. long, ... *M. Khasyana.*
Pedicels thick, 1—2½ lin. long, ... *M. semiserrata.*

× × Stigmas almost sessile. Leaves entire.

Leaves exactly those of *M. capitellata;* pedicels thick, shorter than the flower or drupe; stigmas small, ... *M. avenis.*

* * *Stigma simple, linear and usually thick. Leaves entire.*

Flowers almost sessile or shortly pedicelled, densely clustered; lateral nerves thin but usually distinct, ... *M. capitellata.*

1. M. SEMISERRATA, Wall. in Roxb. Fl. Ind. II. 294 (1824) and Flor. Nep. Tent. 34. t. 24; DC. Prod. VIII. 93. (*M. subspinosa*, Don Prod. Nep. 147 (1825 ?); DC. Prod. VIII. 94 ?).

HAB. Not unfrequent in the hill-forests of Martaban east of Tounghoo, above 6000 ft. elevation.—Fl. Fr. March.

I am not sure about the plant which Wallich figures in his Tent. Nepal; but as all the specimens of Wallich's Herbarium seen by me belong to the short-pedicelled form, I have followed DC. and others in regarding them the same. But there is a form common in the Khasi hills (apparently restricted to this locality) which has very slender, long, and stiff pedicels and this I am inclined to treat as a distinct species (*M. Khasyana*).

2. M. AVENIS, DC. in Linn. Trans. XVII. 108. and Prod. VIII. 96; Scheff. Comm. Myrs. 47. (*Ardisia avenis*, Bl. Bydr. 691).

HAB. Not unfrequent in the drier hill-forests of Martaban east of Tounghoo, at 4000 to 7000 ft. elevation.—Fl. March.

I am not sure whether the Burmese tree is Blume's species, which I have not seen. Scheffer's *M. avenis*, from Banca, is hardly the same as Blume's.

3. M. CAPITELLATA, Wall. in Roxb. Fl. Ind. II. 295 and Tent. Fl. Nepal. 35. t. 24; Bot. Mag. t. 3222; Wight Icon. t. 1211; DC. Prod. VIII. 95; Bedd. Fl. Sylv. t. 234. *M. lucida*, Wall. Cat. 2298; DC. Prod. VIII. 95.

HAB. Not unfrequent in the eng-forests of the Prome District; Ava, Taong-dong (Wall.); Martaban, Nattoung hills (Rev. Mason).

Of this species there are two forms, or more likely two distinct species,—the genuine one, represented also in Burma, which has clustered sessile or almost sessile flowers, and the nerves of which are thin but pretty distinct,—and the pedicellate form, the flowers of which rest on short thick pedicels, and this also has the lateral nerves very obsolete.

Samara, L. (1767).

(*Embelia*, Burm. 1768.)

Conspectus of Species.

* *Inflorescence terminal, or terminal and axillary. Filaments short and thick.*

× Leaves softly pubescent.

Inflorescence brown puberulous; pedicels capillary, ... *S. microcalyx.*

× × Leaves glabrous.

Branchlets and inflorescence greyish or tawny velvety or puberulous; pedicels terete, .. *S. Ribes.*

As preceding, but the velvety pubescence always greyish; flowers sessile, *S. sessiliflora.*

All parts, also the inflorescence, quite glabrous; pedicels 4-cornered, ...*S. floribunda.*

* * *Inflorescences axillary only. Filaments longer than the anthers, slender and filiform. Young shoots more or less pubescent.*

× Leaves beneath more or less pubescent (at least the nerves). Flowers 5-merous.

† Leaves on long petioles.

Leaves 3—5 in. long; racemes elongate; pedicels short, ...*S. robusta.*

Leaves 2—2½ in. long; racemes short; pedicels very long and slender, ...*S. vestita.*

† † Leaves almost sessile.

Leaves ½—1 in. long, distichous, not pellucid-dotted, only the midrib puberulous; racemes very short and almost umbel-like, ... *S. parviflora.*

× × Leaves quite glabrous. Flowers 4-merous.

Leaves ½—1 in. long, serrately 3-toothed at the apex, conspicuously gland-dotted beneath; racemes very short and almost umbel-like,..... *S. Myrtillus.*

1. S. RIBES, Bth. and Hf. (*Embelia Ribes*, Burm. Fl. Ind. 62. t. 23; DC. Prod. VIII. 85; Roxb. Fl. Ind. I. 586; Scheff. Comm. Myrs. 38; *Embeliæ* sp. Griff. Not. Dicot. 293 ?).

Var. *α.* GENUINA, leaves destitute of hollow glands; flowers racemose, in panicles.

Var. *β.* GLANDULIFERA, (*Embelia glandulifera*, Wight Icon. t. 1207; Walp. Ann. I. 494), leaves with many or only few hollow glands along or near the midrib; flowers often in simple axillary racemes, only those at the ends of the branchlets panicled.

HAB. Var. *α.* frequent in the tropical forests of Martaban and Tenasserim; also Chittagong.—Fr. March.

2. S. SESSILIFLORA, (*Embelia sessiliflora*, Kurz in Journ. As. Soc. Beng. 1871. 66).

HAB. Burma, probably Karen hills.

Probably only a sessile-flowered variety of the preceding species.

3. S. FLORIBUNDA, Bth. and Hf. (*Embelia floribunda*, Wall. in Roxb. Fl. Ind. II. 291; DC. Prod. VIII. 85; *Embelia garciniæfolia*, Miq. Pl. Jungh. 187; Scheff. Comm. Myrs. 40).

HAB. Not unfrequent in the stunted hill-forests of the Nattoung, Martaban, at 6000—7200 ft. elevation.—Fl. March.

4. S. ROBUSTA, Bth. and Hf. (*Embelia robusta*, Roxb. Fl. Ind. I. 587; DC. Prod. VIII. 86; *Embelia picta*, DC. l. c.).

Var. *α.* ROXBURGHII, Kurz For. Fl. Burm. II. 103.

Var. *β.* VILLOSA, Kurz l. c. (*Embelia villosa*, Wall. in Roxb. Fl. Ind. II. 289; DC. Prod. VIII. 85; *Embelia ferruginea*, Wall. ap. DC. Prod. l. c. 86).

Hab. Only var. β. but this form common in the upper mixed forests, all over the Pegu Yomah and from Martaban down to Tenasserim.—Fl. Aug., Sept.; Fr. Jan., Febr.

The extreme forms of *Embelia robusta*, and *E. villosa*, look very different, but they offer no characters for a safe distinction. The length of the pedicels and of the bracts and the thickness of the rachis of the racemes vary as much as the indumentum. The striæ on the drupes of *E. robusta* are not always present.

5. S. vestita, Bth. and Hf. (*Embelia vestita*, Roxb. Fl. Ind. ed. Wall. II. 288; DC. Prod. VIII. 88; *Embelia nutans*, Wall. l. c. 290).

Hab. Rather rare in the tropical forests, especially along choungs, of the Pegu Yomah.

6. S. parviflora, (*Embelia parviflora*, Wall. Cat. 2307; DC. Prod. VIII. 86; Scheff. Comm. Myrs. 44).

Hab. Ava (Griff. 3545); Khakyen hills (J. Anderson).—Fl. March.

7. S. Myrtillus, (*Myrsine Myrtillus*, Hook. Icon. t. 825; Walp. Ann. V. 473; *Embelia Myrtillus*, Kurz in Journ. As. Soc. Beng. 1871. 67).

Hab. Burma (Griff. 3542).

Ardisia, Sw.

Conspectus of Species.

* *Panicles irregularly branched and compound, terminal, or accompanied by smaller ones in the axils of the upper leaves.*

\+ Pedicels much shorter than the calyx, or the flowers almost sessile.

Leaves entire; panicle stiff and stout, rusty puberulous; calyx-lobes acute, .. *A. rigida.*

× × Pedicels much longer than the calyx.

† Leaves entire.

Leaves coriaceous, decurrent on the strong petiole, the nerves arising at an acute angle; panicle glabrous or nearly so, ample; peduncle angular, ... *A. paniculata.*

Leaves almost chartaceous, not decurrent, the nerves diverging almost rectangularly, numerous; panicle slightly puberulous; peduncle compressed, ... *A. anceps.*

Leaves chartaceous; panicles rusty-puberulous, chiefly from the axils of the upper leaves; calyx-lobes lanceolate, ... *A. neriifolia.*

† † Leaves serrulate.

Habit of the preceding; calyx-lobes linear, ... *A. serrulata.*

* * *Flowers in racemes often contracted umbel-like, rarely the racemes or umbels simply compound, axillary, lateral or axillary and terminal.*

× Umbels in small axillary corymbs or cymes. (*Pimelandra*, DC.)

Nearly glabrous; leaves thin coriaceous; flowers minute; cymes rusty velvety, of the length of the petiole, ... *A. eugeniæfolia.*

× × Umbels or racemes simple or compound.

† Umbels forming a simple terminal panicle.

Very like *A. attenuata*, but umbels panicled; leaves much dotted; pedicels $\frac{1}{2}$—1 in. long, ... *A. Andamanica.*

† † Umbels or racemes simple, very rarely slightly compound, axillary or lateral, rarely spuriously terminal, *i. e.* arising laterally from the summit of an axillary shoot.

O Leaves entire.

‡ Calyx-lobes acute or acuminate, lanceolate or narrow.

Racemes almost terminal, umbel-like, puberulous, ... *A. grandifolia.*

‡ ‡ Calyx-lobes broad, rounded or blunt.

△ Young shoots, and often also the inflorescence or under surface of leaves, puberulous or pilose.

Pedicels 8—10 lin. long, recurved; calyx-lobes a line long, ... *A. Amherstiana.*

△ △ Quite glabrous.

Pedicels ½ in. long; leaves 5—10 in. long, obovate-lanceolate, ... *A. polycephala.*

Pedicels about an inch long.

Leaves 3—5 in. long; corolla-lobes nearly 2½ lin. long, ... *A. oblonga.*

Leaves 3—5 in. long, obovate-lanceolate, the lateral nerves rather distant, thin but strong, irregular, ... *A. humilis.*

Very similar to the above but the leaves more coriaceous, the lateral nerves rather crowded, straight, thin and often obsolete, ... *A. littoralis.*

O O Leaves more or less serrate or crenate (at least towards the apex).

‡ Inflorescence peduncled, simple.

△ Calyx-lobes bluntish.

Glabrous or the young shoots and slender-bracted racemes puberulous; leaves acute, .. *A. Wallichii.*

Glabrous; leaves blunt; racemes umbel-like, puberulous or glabrous, somewhat shorter than the leaves, ... *A. Brandisiana.*

△ △ Calyx-lobes acute.

Rusty tomentose or pubescent; leaves acuminate, ... *A. Helferiana.*

‡ ‡ Racemes peduncled, simply compound.

Habit of *A. crispa*, but leaves larger and green, callous-repand-toothed, conspicuously gland-dotted beneath; pedicels up to ½ in. long; berries the size of a pea, striate, .. *A. membranacea.*

Very similar to the above, but racemes divaricately corymbose and spuriously terminal; pedicels up to 2 in. ..... *A. virens.*

‡ ‡ ‡ Inflorescence umbellate, sessile, or at least the primary racemes sessile and the lateral ones peduncled.

Umbels sessile, like the leaves glabrous; calyx-lobes a line long, ... *A. crispa.*

Leaves beneath and the sessile umbels brownish or rusty tomentose; calyx-lobes 2½ lin. long, ... *A. villosa.*

1. A. RIGIDA, Kurz in Journ. As. Soc. Beng. 1873. 87.

HAB. Tenasserim (or Andamans) (Helf. 3563).

N. B. *Ardisia chrysophylloides*, Miq. = *A. tuberculata*, Wall.

2. A. PANICULATA, Roxb. Fl. Ind. I. 580; DC. Prod. VIII. 126; Bot. Reg. t. 638; Bot. Mag. t. 2364.

HAB. Hilly parts of Chittagong (Roxb.).

3. A. ANCEPS, Wall. in Roxb. Fl. Ind. II. 280; DC. Prod. VIII.

127. (*A. Blumei*, DC. in Linn. Trans. XVII. 117 and Prod. VIII. 128, *teste* Scheffer).

Hab. Not unfrequent in the tropical forests of Martaban and Tenasserim, up to 3000 ft. elevation.—Fr. Febr.—May.

Scheffer attributes black berries to the Blumean species, while the Roxburghian has them white when fully ripe.

4. A. neriifolia, Wall. ap. DC. Prod. VIII. 127.

Hab. Burmah (Griff. 3581), probably Ava hills.

5. A. serrulata, Kurz in Journ. As. Soc. Beng. 1873. 87.

Hab. Burmah (Griff. 3562), probably Ava hills.

6. A. eugeniæfolia, Wall. Cat. 2276; DC. in Linn. Trans. XVII. 120 and Prod. VIII. 130.

Hab. Burmah (Griff. 3598, with smaller flowers); Martaban, Taipo Mountains, at 4000 ft. elevation.—Fl. Febr.

7. A. Andamanica, Kurz For. Fl. Burm. II. 108.

Hab. Not unfrequent in the tropical forests of the Andaman islands. —Fl. June.

So very near to *A. oblonga*, DC., that the inflorescence only distinguishes it.

8. A. grandifolia, DC. in Linn. Trans. XVII. 122 and Prod. VIII. 132.

Hab. Tenasserim, Tavoy.

Unknown to me.

9. A. Amherstiana, DC. in Linn. Trans. XVII. 120 and Prod. VIII. 131.

Hab. Pegu, near Rangoon (Cleghorn); Tenasserim, apparently frequent around Moulmein (Wall., Falconer).—Fl. March; Fr. Febr., March.

N. B. *A. reflexa*, Wall. Cat. 2282. p. p.; DC. in Linn. Trans. XVII. 122, and Prod. VIII. 132, is a species unknown to me and comes from Tenasserim. The description does not point out differences from the preceding species.

10. A. polycephala, Wall. Cat. 2293; DC. in Linn. Trans. XVII. 118 and Prod. VIII. 131.

Var. β. acuminata, leaves acuminate, the nerves strong and anastomosizing within the margin of the leaves. Probably a distinct species.

Hab. Tenasserim, Salween river above Murgyee, near the large mount (Wall.; Helf.); var. β. frequent in the tropical forests all along the eastern slopes of the Pegu Yomah and in those of Martaban.—Fl. Fr. March—May.

N. B. *A. arborescens* (Wall. Cat. 2289; DC. in Linn. Trans. XVII. 120 and Prod. VIII. 131, from Taoung-dong, Ava), is unknown to me.

11. A. OBLONGA, A. DC. in Linn. Trans. XVII. 121 and Prod. VIII. 131.

HAB. Not unfrequent in the tropical forests of Martaban and Tenasserim; also Andamans.—Fl. June; Fr. Sept.—March.

N. B. *A. attenuata*, Wall. Cat. 2286 p. p.; DC. in Linn. Trans. XVII. 119 and Prod. VIII. 131 from Tavoy, is unknown to me but apparently not different from the above.

12. A. HUMILIS, Vahl Symb. Bot. III. 40 (1794); DC. Prod. VIII. 129; Wight Icon. t. 1212.—(*A. solanacea*, Roxb. Corom. Pl. I. 27. t. 27 and Fl. Ind. I. 580; Bot. Mag. t. 1677; *A. elliptica*, Thbg. Nov. gen. pt. 8. (1795) ?)

HAB. Frequent in the tropical forests of the Pegu Yomah, Arracan and Martaban.—Fl. March—April; Fr. Octob.

13. A. LITTORALIS, Andr. Repos. X. t. 630 (1804).—(*A. obovata*, Bl. Bydr. 688; DC. Prod. VIII. 132; *A. umbellata*, Roxb. Fl. Ind. I. 582 (ed. prior II. 273); *Climacandra obovata*, Miq. Pl. Jungh. I. 199 and Fl. Ind. Bat. II. 1030; Scheff. Comm. Myrs. 95; *Climacandra umbellata*, Miq. l. c.; *Climacandra littoralis*, Kurz in Journ. As. Soc. Beng. 1871. 68).

HAB. In the beach-jungles and along the sea-coasts of Tenasserim and the Andamans.—Fl. May, June.

14. A. WALLICHII, DC. in Linn. Trans. XVII. 123 and Prod. 137.

Var. *α.* GENUINA, the young shoots and inflorescence covered with a rusty-brown floccose-pilose pubescence, the net-venation more copious and more prominent, the dots more conspicuous.

Var. *β.* GLABRIUSCULA, young shoots glabrous; inflorescence and pedicels indistinctly puberulous; net-venation almost obsolete.

HAB. Frequent all over Pegu and Martaban down to Tenasserim; var. *α.* in the low and eng-forests; var. *β.* chiefly in the mixed forests. Fl. Fr. Sept.—Jan., chiefly April, May.

15. A. BRANDISIANA, Kurz in Journ. As. Soc. Beng. 1871. 67.

HAB. Martaban, Salween, along a choung near Toumbjotseik, below 500 ft. elevation, (Dr. Brandis).—Fl. May.

16. A. HELFERIANA, Kurz in Journ. As. Soc. Beng. 1873. 86.

HAB. Tenasserim (Helf. 3589).

17. A. VIRENS, Kurz For. Fl. Burm. II. 575.

HAB. Ava, Khakyen hills (J. Anderson).

Leaves and inflorescence very like those of *Amblyanthus glandulosus*.

18. A. CRISPA, DC. in Linn. Trans. XVII. 127 and Prod. VIII. 134. (*Bladhia crispa*, Thbg. Fl. Jap. 97 ?; *A. crenulata*, Lodd. Bot. Cab. t. 2., non Vent.; *A. crenata*, Bot. Mag. t. 1950; Roxb. Fl. Ind. I. 583, in icone ined. flores flavescentes depicti; *A. lentiginosa*, Bot. Reg. t. 553; *A. densa*, Miq. Suppl. Fl. Sum. 575; *A. macrocarpa*, Wall. in Roxb. Fl.

Ind. II. 271 ; DC. Prod. VIII. 134 ; *A. polysticta*, Miq. Suppl. Fl. Sumatr. I. 576 ; Scheff. Comm. Myrs. 75, sepalis acutis).

Hab. Not unfrequent in the damp hill-forests of the Martaban hills, at 4000—7000 ft. elevation ; Burmah, probably Ava (Griff. 3583/1).—Fl. —Fr. March.

Thunberg's species has not only a different nervature but is characterised also by the numerous conspicuous gland-dots. Khasi specimens (Hb. Hf. and Th. No. 41), however seem identical with the Japan plant.

19. A. villosa, Roxb. Fl. Ind. I. 582 ; DC. Prod. VIII. 136.—(*A. mollis*, Bl. Bydr. 689 ; *A. villosa*, *β. mollis*, DC. l. c. ; Scheff. Comm. Myrs. 90 ; *A. vestita*, Wall. in Roxb. Fl. Ind. II. 274 ; DC. l. c.)

Var. *α.* Roxburghiana, leaves more or less rusty pubescent, at least on the nerves.

Var. *β.* glabrata, (*A. glabrata*, Bl. Bydr. 692 ; DC. Prod. VIII. 136), leaves glabrous at least when full-grown ; calyx glabrous or nearly so.

Hab. Var. *α.* only, Martaban, Taipo mountain, at 4000 ft. elevation (Dr. Brandis) ; Tenasserim, Tavoy (Wall.).—Fl. Sept., Octob. ; Fr. Oct.—Febr.

Ægiceras, Gærtn.

1. *Æ.* corniculata, Blanco Fl. Filip. 79. (*Rhizophora corniculata*, L. sp. pl. 635 ; Rheed. Hort. Malab. VI. t. 36 ; *Æ. majus*, Gærtn. Fruct. I. 216. t. 46. f. 1 ; DC. Prod. VIII. 142 ; Roxb. Fl. Ind. III. 130 ; Scheff. Comm. Myrs. 97 ; *Æ. minus*, Gærtn. ; DC. l. c. ; *Æ. fragrans*, Kœn. Ann. Bot. I. 129 ; Hook. Bot. Misc. III. 84. t. 21 ; Griff. Not. Dicot. 294. t. 548. f. a.).

Hab. Frequent in the mangrove and tidal forests all along the coasts, from Chittagong down to Tenasserim and the Andamans.—Fl. Febr., March.

SAPOTACEÆ.

Conspectus of Genera.

Trib. 1. *Isomeri.* Calyx-lobes equal in number to the corolla-lobes.

* *Calyx-segments uniseriate.*

× Staminodes entirely absent.

Chrysophyllum. Flowers 5-, rarely 6—7-merous, with as many ovary-cells and stamens.

× × Staminodes as many as stamens and usually alternating with them.

Sideroxylon. Flowers 5-merous. Ovary-cells 5—2. Stamens 5. Seeds albuminous.

Sarcosperma. Flowers 5-merous. Stamens and ovary-cells 5 each. Seeds without albumen. Stipules caducous.

* * *Calyx-segments in 2 distinct series.*

× Stamens as many as petals and alternating with as many staminodes

Achras. Flowers 6-merous. Stamens 6. Ovary-cells 12.

× × Stamens twice as many as petals, or numerous. Staminodes none.

Isonandra. Flowers 4-merous. Stamens 8. Seeds with albumen. Ovary-cells 4.

Dichopsis. Flowers 6-merous. Stamens 12. Albumen none. Ovary-cells 6.

Trib. 2. *Anisomeri.* Corolla-lobes usually 2—3 times as many as calyx-lobes.

* *Staminodes none.*

× Ovary-cells twice as many as calyx-segments.

Hexameria. Calyx-lobes 6. Corolla-lobes and stamens each 12. Ovary-cells 12.

Payena. Calyx-lobes 4. Corolla-lobes, stamens, and ovary-cells 8 each.

× × Ovary-cells as many as calyx-segments.

Bassia. Calyx-lobes and ovary-cells 4 or 6; corolla-lobes 8—14. Stamens about 2 or 3 times as many as corolla-lobes, in 1—3 series.

* * *Staminodes* 6 *or* 8.

Mimusops. Calyx-lobes and ovary-cells 6 or 8 each; corolla-lobes 2 or 3 times as many.

Chrysophyllum, L.

1. Ch. Roxburghii, G. Don in Mill. Dict. IV. 33; Bedd. Sylv. Madr. t. 236. (*Ch. acuminatum*, Roxb. Fl. Ind. I. 599, non Lamk.; *Ch. Sumatranum*, Miq. Suppl. Fl. Sumatr. 579.)

Hab. Rather rare in the tropical forests above Rangoon, Pegu.—Fl. June; Fr. Dec.

Sideroxylon, L.

Conspectus of Species.

Subg. 1. *Oligotheca*, DC. Calyx-lobes acuminate or acute. Young shoots and under-surface of leaves more or less villous-tomentose.

Armed with long solitary supra-axillary spines; calyx-lobes acute, ... *S. armatum.*

Unarmed; calyx-lobes acuminate, ... *S. tomentosum.*

Subg. 2. *Eu-Sideroxylon.* Calyx-lobes rounded or blunt.

* *Berries* 1—2-*seeded.*

Younger parts coppery or rusty-silk hairy; leaves coriaceous, ... *S. attenuatum.*

* * *Berries several* (5—10)-*seeded.*

Glabrous; leaves chartaceous, ... *S. grandifolium.*

1. S. tomentosum, Roxb. Corom. Pl. I. 28. t. 28 and Fl. Ind. I. 602. (*Sapota? tomentosa*, DC. Prod. VIII. 175).

Var. *β.* spinescens, the younger branchlets armed with short sharp spines in the leaf-axils.

Hab. Not unfrequent in the eng and dry forests of Prome; var. *β.* Pegu, more probably Prome (Dr. Brandis).

I have only leaf-specimens, and the identification is, therefore, somewhat doubtful.

2. S.? parvifolium, Kurz For. Fl. Burm. II. 576 (*Mimusops parvifolia*, Kurz For. Fl. Burm. II. 123, excl. flor.)

Hab. Rather rare in the eng-forests of Prome; Ava, below Yenangchoung (Wall. Cat. 4146 G.).

Very like *S. elengoides*. It is rather a small tree, spiny armed, but Wallich's incomplete specimen (although doubtless identical) is unarmed. The flowers (loose) attached to Wallich's specimen resemble those of *Mimusops littoralis*, and I now entertain little doubt that they do not belong at all to the leaf-specimens.

3. S. ATTENUATUM, DC. Prod. VIII. 178; Wight Icon. t. 1590; Miq. Fl. Ind. Bat. II. 1037.

HAB. Tropical forests of Tenasserim, from Moulmein (Falconer) down to Mergui (Helfer, Gfiff., etc.); also Andamans, Narcondam island.—Fl. March.

4. S. GRANDIFOLIUM, Wall. in Roxb. Fl. Ind. II. 349; DC. Prod. VIII. 178.—*(S. regium*, Wall. Cat. 4156).

HAB. Martaban, hill-ranges between the Beeling and Sittang (Dr. Brandis); Pegu (Wall.); tropical forests of the Andamans.—Fl. April; Fr. Febr., March.

The seeds of this species are albuminous.

Sarcosperma, Hf.

1. S. ARBOREUM, Hf. in Bth. Gen. Pl. II. 655. *(Sideroxylon arboreum*, Ham.; *Sapotea*, Griff. Not. Dicot. 291. t. 501).

HAB. Upper Burma, Namyoon (Griff.).

Achras, L.

1. A. SAPOTA, L. sp. pl. 470; Jacq. Amer. 57. t. 41; Bot. Mag. t. 3111—12; Roxb. Fl. Ind. II. 181.—(Sapota Achras*, Mill. Dict. No. 1.; DC. Prod. VIII. 174; Miq. Fl. Ind. Bat. II. 1036).

HAB. Of American origin, now frequently planted along roads at Rangoon and other larger stations.—Fl. RS.

Isonandra, Wight.

Conspectus of Species.

Subg. 1. *Eu-Isonandra.* Flowers 4-merous. Seeds albuminous.

Subg. 2. *Apobassia*, DC. Flowers 4- or 6-merous. Seeds without albumen.

* *Flowers 4-merous.*

Leaves chartaceous, strongly nerved, ... *I. caloneura.*

* * *Calyx 6-parted, the 3 outer segments valvate* (Dichopsis, Thw.).

Leaves coriaceous, glaucous beneath, the nerves obsolete; filaments as long as the anthers, densely villous, ... *I. polyantha.*

Leaves coriaceous, glaucous beneath, the nerves strong and parallel; filaments long and slender, ... *I. obovata.*

1. I. CALONEURA, Kurz in Journ. As. Soc. Beng. 1871. 69 and 1873. 88 *(calophylla).—(Bassia caloneura*, Kurz in Andam. Rep. 41).

HAB. Not unfrequent in the tropical forests of the Andamans.—Fr. May.

Dichopsis and *Isonandra* differ in the number of floral parts and in the absence or presence of a rather scanty albumen. This species, however, has 4-merous flowers and no albumen, and hence I fear that the character derived from the albumen is of the same value as in *Linociera*, etc., amongst *Oleaceae*.

2. I. POLYANTHA. (*Bassia polyantha*, Wall. Cat. 4166; DC. Prod. VIII. 198; *Dichopsis polyantha*, Bth. and Hf. Gen. pl. II. 658).

HAB. Tropical forests of Boronga-island, near Akyab, Arracan, at 500—1000 ft. elevation.

There is another *Isonandra* in HBC. in leaf only, from Martaban, Mittigate (Falconer), with large chartaceous strongly parallel-nerved leaves glaucous beneath. It seems very near allied to the above.

3. I. OBOVATA, Griff. Not. Dicot. 293. (*Bassia ? hypoleuca*, Miq. Suppl. Fl. Sumatr. 582).

HAB. Tenasserim (Griff., Helfer); Moulmein (Falconer).—Fr. March.

Payena, A. DC.

Conspectus of Species.

Subg. 1. *HEXAMERIA*, Griff. Calyx 6-parted.

Filaments very short, villous; anthers glabrous, mucronate-acuminate, ... *P. Griffithii.*

Subg. 2. *EU-PAYENA.* Calyx 4-parted.

* *Anthers pilose* (Ceratophorus, Hassk.).

* * *Anthers glabrous.*

Connective of anthers produced into a broad blunt beak; sepals blunt or nearly so; nerves somewhat irregular; petiole about $\frac{1}{4}$—$\frac{1}{2}$ in. long, ... *P. lucida.*

Connective terminating in a bristle; sepals acute; nerves thin, parallel; petiole about an in. long, slender, ... *P. parallelonevra.*

1. P. LUCIDA, DC. Prod. VIII. 197; Miq. Fl. Ind. Bat. I. 1039. —(*Ceratophorus Wightii*, Hassk. Retz. I. 601; Miq. Fl. Ind. Bat. I. 1039; *Isonandra polyandra*, Wight Icon. t. 1589).

HAB. Burma (rather Malacca ?) (Griff. 3605).

2. P. PARALLELONEURA, Kurz in Journ. As. Soc. Beng. 1871. 70.

HAB. Frequent in the tropical forests of Martaban down to Tenasserim (Helf. 3611).—Fl. March; Fr. April, May.

Bassia, Kœn.

(*Dasyaulus*, Thw.; *Kakosmanthos*, Hassk.).

Conspectus of Species.

* *Anthers aristate, included, on very short filaments or almost sessile.*

Corolla-lobes very short (about $\frac{1}{3}$ as long as the tube); anthers in 3 rows; berries obovate-oblong, ... *B. latifolia.*

Corolla-lobes as long as the tube; anthers in 2 rows; berries unknown, ... *B. villosa.*

* * *Anthers blunt, on long slender filaments and exserted.*

Corolla-lobes as long as the tube; anthers in a single row inserted at the throat; berries ovate, acuminate, ... *B. butyracea.*

1. B. VILLOSA, Wall. Cat. 4165; DC. Prod. VIII. 198.

HAB. Ava, Taong-dong (Wall.).—Fl. Nov.

Mimusops, L.

Conspectus of Species.

Leaves rounded or retuse; flowers solitary, rather small; anthers blunt (?); berries the size and shape of a wood-apple, 5—6-seeded, ... *M. littoralis.*

Leaves bluntish acuminate or apiculate; flowers clustered, conspicuous; anthers very acuminate; berries oval, usually 1-seeded, ... *M. Elengi.*

1. M. LITTORALIS, Kurz in Journ. As. Soc. Beng. 1876. 138. (*M. Indica*, Kurz Andam. Rep. 42 and in Journ. As. Soc. 1871. 70).

HAB. Frequent in the coast-forests of the Andamans; also Tenasserim, Moulmein (Wallich, Theobald) and further south (Griff. 3613).—Fl. June, July; Fr. CS.

2. M. ELENGI, L. sp. pl. 497; DC. Prod. VIII. 202; Roxb. Corom. Pl. I. 15. t. 14. and Fl. Ind. II. 236; Miq. Fl. Ind. Bat. II. 1042; Wight Icon. t. 1586; Bedd. Sylv. Madr. t. 40).

HAB. Not unfrequent in the tropical forests of South Andaman, also in those of Martaban and Tenasserim; generally planted in villages all over Burmah.—Fl. Febr.—Sept.

EBENACEÆ.

Conspectus of Genera.

* *Ovary-cells with* 2 *ovules.*

MABA. Calyx- and corolla-lobes usually trimerous. Ovary-cells usually as many as corolla-lobes.

CARGILIA. Calyx and corolla 4—6-merous. Ovary-cells usually twice as many as corolla-lobes.

* * *Ovary-cells* 1-*ovuled.*

× Anthers opening by longitudinal slits.

GUNISANTHUS. Calyx- and corolla-lobes usually 4, rarely 6. Ovary-cells usually as many. Male and female flowers all solitary. Calyx of males divided to the base, the lobes narrow, membranous.

DIOSPYROS. Calyx- and corolla-lobes usually 4—6. Male flowers clustered or cymose, the females solitary, or rarely in cymes or panicles. Calyx of males gamosepalous.

× × Anthers opening laterally by apical pores.

LEUCOXYLON. Characters of *Diospyros.*

Maba, Forst.

Conspectus of Species.

* *Ovary* 6-*celled, the cells* 1-*ovuled.*

Glabrous or nearly so; ovary glabrous, ... *M. Merguiensis.*

* * *Ovary* 3-*celled, densely pubescent.*

Leaves small, glabrous ; berries globular, the size of a pea, ... *M. buxifolia.*
Leaves large, hirsute along the nerves beneath ; berries oblong, more than an inch long, .. *M. Andamanica.*

1. M. Merguiensis, Hiern Monog. Ebenac. 134.

Hab. Tenasserim, Mergui Archipelago (Helf. and Griff. 3618).—Fl. Jan. ; Fr. Febr.

I separate the species with 1-ovulate and 2-ovulate ovary-cells, and from this point of view the above species, which has 1-ovulate ovary-cells apparently twice as numerous as the floral parts, cannot be a true *Maba*, but may be referable to *Diospyros*. I have seen no specimens of it.

2. M. buxifolia, Pers. Ench. II. 606 ; DC. Prod. VIII. 240 ; Miq. Fl. Ind. Bat. II. 1050 ; Wight Icon. t. 763 ; Hiern Monog. Eben. 116 ; Bedd. Fl. Sylv. Madr. 148. t. 19. f. 4. (*Ferreola buxifolia*, Roxb. Corom. Pl. I. 35. t. 45. and Fl. Ind. III. 790 ; *M. Neilgherrensis*, Wight Illust. t. 148 bis ; *M. Ebenus*, Wight Icon. t. 1228—9).

Hab. Tenasserim, from Moulmein southwards (Griff., Wall., Falconer).—Fl. Febr., March.

3. M. Andamanica, Kurz in Journ. As. Soc. Beng. 1876. 138. (*Macreightia Andamanica*, Kurz And. Rep. 42 ; Hiern Monogr. Ebenac. 124).

Hab. Frequent in the moister upper mixed forests of the Andamans. —Fl. RS. ; Fr. April.

Gunisanthus, DC.

Conspectus of Species.

Not flowering branchlets sparingly pubescent ; leaves glabrescent ; calyx-tube half the length of the corolla-lobes, ... *G. pilosulus.*
Not flowering branchlets densely villous ; leaves beneath permanently softly pubescent ; calyx-tube a little shorter than the corolla-lobes, ... *G. mollis.*

1. G. pilosus, DC. Prod. VIII. 220.—(*Diospyros pilosulus*, Wall. Cat. 4132 ; Hiern Monog. Eben. 188).

Hab. Not unfrequent in the tropical forests of the Andamans ; also in those of the Pegu Yomah.—Fl. April ; Fr. May, June.

2. G. mollis, Kurz in Journ. As. Soc. Beng. 1873. 88.

Hab. Not unfrequent along choungs in the tropical forests of Martaban east of Tounghoo.—Fl. March.

Very near allied to the preceding species.

Diospyros. L.

Conspectus of Species.

Subg. 1. *AMUXIS*, Hiern. Calyx in bud globular and closed, the lobes connate but afterwards bursting irregularly into 2 or 3 lobes. Corolla tubular, 5-lobed. Ovary-cells as many as corolla-lobes.

Glabrous; leaves coriaceous and elegantly net-veined; corolla conspicuous, about 4 lin. long, very coriaceous, ... *D. Toposia.*

Subg. 2. *EU-DIOSPYROS*, DC. Calyx toothed or lobed, rarely truncate. Ovary-cells often twice as many as corolla-lobes.

* *Calyx in males short and truncate-toothed, in females large, deeply lobed; corolla urceolate, the lobes notched; anthers* 30—50.

Glabrous; leaves coriaceous, ... *D. Embryopteris.*

* * *Calyx toothed or lobed; corolla-lobes not notched; anthers about* 20 *or fewer.*

× Corolla urceolate, in bud globular or conical, the tube short and inflated, the lobes usually rounded and short.

\+ Flower-buds globular; corolla quite glabrous; flowers small, hardly a line long.

Leaves thin chartaceous, with strong prominent nerves, the net-venation distinct, lax; ovary glabrous, ... *D. chartacea.*

Leaves thin-coriaceous, the nerves strong, the net-venation inconspicuous; ovary tawny villous, ... *D. chretioides.*

\+ \+ Flower-buds conical, acute, but never elongate.

† Ovary pubescent or villous. Leaves quite glabrous and glossy.

Flowers rather large, clustered, from the older branches, ... *D. ramiflora.*

Leaves glaucous-green when dry, almost polished, the nerves very inconspicuous and impressed; peduncles 4—5 lin. long; nearly 5—6 lin. long, axillary,.. *D. oleifolia.*

† † Ovary glabrous or nearly so.

‡ Leaves more or less rigid, quite glabrous, glossy.

Leaves drying blackish, the nerves and net-venation thin but prominent; flowers small axillary, the males cymose; berries globose, the size of a cherry; albumen homogeneous, ... *D. Kurzii.*

‡ ‡ Leaves membranous, at least while somewhat young more or less puberulous or pubescent.

O Berries sessile or nearly so.

Calyx-lobes of males acute; leaves more or less acuminate; berries the size of a cherry; albumen homogeneous, ... *D. mollis.*

Calyx-lobes blunt; leaves acute or apiculate; berries 2 or 3 times as large,.... *D. Kaki.*

O O Berry rather long-peduncled.

Leaves glaucescent, glabrescent; berries the size of a cherry; albumen homogeneous; spiny-armed tree, ... *D. montana.*

Leaves pubescent beneath; berries about an in. in diameter; albumen ruminate on the outer face; unarmed tree, peduncles shorter and stout,..... (*D. cordifolia* ?)

× × Corolla salver-shaped, elongately (very rarely shortly) conical, the tube not or hardly widened, the lobes as long or nearly as long as the tube.

\+ Borders of the calyx-lobes of female flowers reflexed or revolute, at least at the base, and often appearing somewhat auricled.

† Corolla in bud short-conical. (*Otogyne*, DC.).

All younger parts tawny or greyish tomentose; leaves coriaceous, glabrescent above; flowers usually 5 (4—6)-merous; albumen ruminate, ... *D. Burmanica.*

Slightly appressed pubescent; leaves thin chartaceous; flowers 4-merous; calyx-lobes silky-pubescent, especially inside; ovary densely fulvous-tomentose,.. *D. rhodocalyx.*

† † Corolla in bud elongate conical, 4-angular. Flowers 4-merous.

O Flowers (both sexes) forming tomentose bracted usually compound cymes. Berries globular.

Peduncles long, the cyme often compound ; net-venation of leaves obsolete, *D. densiflora.*

Cymes large, corymb-like, fuliginous-velvety; net-venation strong but lax, *D. Horsfieldii.*

O O Flowers short-peduncled or sessile, axillary.

Flowers short-peduncled, clustered ; net-venation indistinct ; berries elliptical, ..*D. flavicans.*

Flowers sessile or nearly so ; net-venation lax but distinct ; berries globular, rusty-pubescent ; albumen homogeneous, ...*D. undulata.*

As preceding, but ovary glabrous, ...*D. sapotoides.*

\+ + Borders of the calyx-lobes in female flowers plain, not reflexed nor recurved.

† All parts, except the very young shoots, quite glabrous. Flowers almost sessile.

Flowers rusty-tomentose ; calyx short, the lobes acute ; leaves strongly net-veined ; berries tawny-tomentose ; corolla 4-cornered in bud, ...*D. lanceæfolia.*

Male calyx bell-shaped, the lobes short, rounded, tomentose ; leaves strongly net-veined berries rusty-tomentose ; corolla terete in bud, ...*D. pyrrhocarpa.*

Calyx ample, puberulous, the lobes rounded ; male cymes very short and stout ; leaves ; strongly net-veined ; corolla terete in bud,.....*D. variegata.*

† † All parts, especially the leaves, more or less pubescent or otherwise hairy ; male flowers in cymes ; berries glabrous.

Leaves not cordate, softly pubescent beneath ; calyx-lobes and bracts acute ; flowers 4-merous, ...*D. stricta.*

Leaves not cordate, adult almost glabrous and chartaceous ; calyx-lobes linear-lanceolate ; cymes branched, arising from the stem and older branches ; flowers 5-merous, ..*D. Brandisiana.*

Leaves with cordate base, softly pubescent ; calyx-lobes and bracts rounded ; cymes short, stout ; flowers 4-merous, ...*D. dasyphylla.*

1. D. Toposia, Ham. in Linn. Trans. XV. 115 ; Bedd. Icon. plant. t. 122 ; DC. Prod. VIII. 237 ; Hiern Monogr. Ebenac. 263.—(*D. racemosa*, Roxb. Fl. Ind. II. 536 ; DC. Prod. VIII. 239 ; Wight Icon. t. 416).

Hab. Chittagong.

2. D. Embryopteris, Pers. Ench. II. 624 ; Bot. Reg. VI. t 499 ; DC. Prod. VIII. 235 ; Griff. Not. Dicot. 289 ; Hiern Monog. Eben. 257 ; Bedd. Sylv. Madr. t. 69. (*Embryopteris glutinifera*, Roxb. Corom. Pl. I. 49. t. 70 ; Wight Icon. t. 843—44 ; *D. glutinosa*, Koen. ap. Roxb. Fl. Ind. II. 533).

Hab. Martaban and Tenasserim, apparently not unfrequent ; often cultivated in villages.—Fl. Aug. ; Fr. Febr.—April.

3. D. chartacea, Wall. Cat. 4135 ; DC. Prod. VIII. 232 ; Hiern Monogr. Ebenac. 230.

Hab. Not uncommon in the tropical forests of Martaban and Upper-Tenasserim.—Fl. March, April.

4. D. ehretioides, Wall. Cat. 4137 ; DC. Prod. VIII. 231 ; Hiern Monogr. Eben. 162.

Hab. Frequent in all leaf-shedding, especially the mixed forests, all over Burmah, from Ava and Martaban down to Pegu, up to 3000 ft. elevation.—Fl. April, May ; Fr. Decb., Jan.

5. D. ramiflora, Roxb. Fl. Ind. II. 535 ; DC. Prod. VIII. 233 ; Wight Icon. t. 189 ; Hiern Monogr. Eben. 235.

Hab. Rather rare in the tropical forests of Arracan ; also Chittagong.

6. D. oleifolia, Wall. Cat. 4128 ; Kurz in Journ. As. Soc. Beng. 1871, 72 ; Hiern Monogr. Eben. 204.

Hab. Frequent in the tropical forests of Martaban and Upper Tenasserim.—Fl. March, April ; Fr. RS.

7. D. Kurzii, Hiern Monogr. Ebenac. 162.

Hab. Frequent in the tropical and moister upper mixed forests of the Andamans.—Fl. May, June ; Fr. Febr.—April.

8. D. mollis, Griff. in Journ. Agr. Hort. Soc. Beng. III. 145. c. icon.

Hab. Frequent in the drier hill-forests of Martaban, at 2—4000 ft. elevation ; Ava, Khakyen hills.—Fl. March.

9. D. montana, Roxb. Corom. Pl. I. 37. t. 48 ; DC. Prod. VIII. 230 ; Wight Icon. t. 1225 and Illustr. t. 148 ; Hiern. Monogr. Eben. 220.

Var. α. genuina, Hiern. l. c. 222. (*D. heterophylla*, Wall. ap. DC. Prod. VIII. 230, *teste* Hiern).

Var. β. cordifolia, Hiern l. c. 222. (*D. cordifolia*, Roxb. Corom. Pl. I. 38. t. 50 and Fl. Ind. II. 538 ; DC. Prod. VIII. 230 ; Wight Illustr. t. 148 ; *D. punctata*, Dene. Hb. Timor. Descr. 79 ; DC. l. c. ; Miq. Fl. Ind. Bat. II. 1046 ; *D. Waldemarii*, Klotzsch in Waldem. Reise 101. t. 55).

Hab. Frequent in all leaf-shedding forests, especially the dry and eng-forests, of Ava, Prome, and Pegu.—Fl. April, March ; Fr. Decb.—Febr.

A variety of this (in the analytical key separated as *D. cordifolia*?) is frequent in the mixed forests of Pegu. It has the leaves much larger (3—4 in. long), but offers (in fruit only) no tangible characters for specific separation. I rely upon the rumination of seeds as little in *Diospyros* as in *Calameæ*.

10. D. Burmanica, Kurz in Journ. As. Soc. Beng. 1871. 73 ; Hiern Monogr. Ebenac. 166.

Hab. Common in the dry and open, especially the eng-forests of Prome and Ava ; less frequent in those of Pegu and Martaban.—Fl. March, April ; Fr. Dec., Jan.

11. D. rhodocalyx, Kurz in Journ. As. Soc. Beng. 1871. 71 ; Hiern Monogr. Eben. 241.

Hab. Siamese provinces of Radburi and Kanburi (Teysmann).—Fl. HS.

Habit and affinity of *D. chloroxylon*,

12. D. DENSIFLORA, Wall. Cat. 4140; DC. Prod. VIII. 233; Hiern Monogr. Eben. 171.

HAB. Rather rare in the tropical forests of Arracan and Martaban; also Tenasserim.—Fl. Febr.; Fr. March.

13. D. HORSFIELDII, Hiern Monog. Eben. 193.

HAB. Tenasserim (Helf. 3620), *teste* Hiern.

14. D. FLAVICANS, Hiern Monog. Eben. 205 (*Ebenacea* 2, Griff. Not. Dicot. 291.)

HAB. Tenasserim (Helfer 3623 and 3639, 3640).

Helfer's No. 3632 (not seen by me) from Tenasserim or the Andamans is referred by Hiern to *D. Moonii*, Thw. (*D. hirsuta*, L.). I fear there is a mistake.

15. D. UNDULATA, Wall. Cat. 4136; DC. Prod. VIII. 233; Hiern Monog. Ebenac. 216.

HAB. Not unfrequent in the tropical forests of Martaban, Tenasserim and the Andamans.—Fr. April, May; Fr. Octob.—Febr.

16. D. SAPOTOIDES, Kurz in Journ. As. Soc. Beng. 1873 88.; Hiern Monog. Ebenac. 206.

HAB. Frequent in the tropical forests of the eastern slopes of the Pegu Yomah (especially along the Choungmeneh choung, Khaboung).—Fl. April.

17. D. LANCEÆFOLIA, Roxb. Fl. Ind. II. 537; DC. Prod. VIII. 232; Hiern Monogr. Ebenac. 213.

HAB. Upper Tenasserim, Moulmein (Falconer).—Fl. March.

18. D. PYRRHOCARPA, Miq. Suppl. Fl. Sumatr. 583; Hiern Monog. Eben. 266.

? Var. *β*. ANDAMANICA, leaves oblong to narrow-oblong, the lateral nerves faint and numerous, net-venation more lax.

HAB. Var. *β*. Rather rare in the tropical forests of the Andamans.—Fl. May.

The Andaman tree, I have little doubt, is a different species, but the material is too incomplete for description.

19. D. VARIEGATA, Kurz in Journ. As. Soc. Beng. 1871. 73; Hiern Monogr. Eben. 203.

HAB. Not unfrequent in the moister upper mixed and the tropical forests of Pegu and Martaban, up to 1000 ft. elevation.—Fl. April.

20. D. STRICTA, Roxb. Fl. Ind. II. 539; DC. Prod. VIII. 232, Hiern Monogr. Eben. 201.

HAB. Chittagong (Hf. and Th.); Tipperah (Roxburgh).

21. D. BRANDISIANA, Kurz in Journ. As. Soc. Beng. 1871. 72; Hiern Monog. Eben. 184.

Hab. Upper Tenasserim, Domdamee forests (Brandis); Ava, Khakyen hills (J. Anderson).—Fl. Febr., March.

22. D. DASYPHYLLA, Kurz in Journ. As. Soc. Beng. 1871. 71; Hiern Monogr. Eben. 203.

Hab. Martaban, Taëpo hills, at 4000 ft. elevation (Brandis).

STYRACEÆ.

Conspectus of Genera.

Styrax. Calyx somewhat enlarging and enclosing the fruit for one half. Corolla slightly twisted or almost valvate in bud. Stamens 10, the anthers elongate. Drupe dry, sometimes valvately dehiscing.

Symplocos. Calyx wholly or nearly wholly adnate to the ovary. Corolla-lobes imbricate in bud. Stamens numerous, indefinite, the anthers short. Drupe more or less succulent, crowded by the calyx-limb.

Styrax, L.

Conspectus of Species.

* *All parts more or less tomentose, the under-surface of the leaves particularly so.*

Leaves white-tomentose beneath; calyx slit spathe-like, conspicuously subulate-toothed, ... *S. rugosum.*

* * *Younger parts more or less tomentose; leaves sparingly and minutely stellate-puberulous, glabrescent and green.*

Calyx 5- or 6-toothed; corolla-lobes narrow-oblong, about 4 lin. long; leaves serrulate. .. *S. serrulatum.*

Calyx truncate and minutely toothed; corolla-lobes ovate, nearly ¾ in. long; leaves remotely and minutely toothed, ... *S. virgatum.*

1. S. RUGOSUM, Kurz in Journ. As. Soc. Beng. 1871. 61.

Hab. Martaban, on the hills between the Sittang and Salween, at 4000 ft. elevation (Dr. Brandis).—Fl. May.

2. S. SERRULATUM, Roxb. Fl. Ind. II. 415; DC. Prod. VIII. 267; Bot. Mag. t. 5950. (*S. floribunda*, Griff. Not. Dicot. 287 ?)

Hab. Chittagong (Roxb.); Ava, Khakyen hills (J. Anderson); (Tenasserim, between Kulweng and Mergui, Griff.)—Fl. March; Fr. Octob.

3. S. VIRGATUM, Wall. Cat. 4400; DC. Prod. VIII. 267.—(*S. grandiflorum*, Griff. Not. Dicot. 287. t. 423).

Hab. Burmah (Griff. 3671), probably Ava.

Symplocos, L.

Conspectus of Species.

* *Ovary 3-celled. Drupes oblong or elliptical, 3-celled. Embryo straight.*

× Drupes sulcate-ribbed.

Young parts more or less rusty-pubescent; flowers sessile or nearly so, in simple tomentose spikes, ... *S. sulcata.*

× × Drupes smooth and terete.

† Racemes or spikes not glabrous.

Glabrous ; flowers sessile, in compound puberulous spikes, ... *S. lucida.*
Young shoots more or less pubescent ; flowers shortly pedicelled, in simple or branched villous-tomentose racemes, ...*S. racemosa.*

† † Racemes quite glabrous.

Glabrous ; petioles and rib beneath sparingly hairy ; racemes slender, ..*S. leiostachya.*

* * *Ovary* 2-*rarely* 3-*celled. Drupes more or less turbinate or obversely pear-shaped, by abortion usually* 1-*seeded, the endocarp often intruding so as to cause the seed to be more or less curved. Embryo curved.*

× Stamens in 2 or more series, not fascicled.

† Flowers sessile, in simple or compound spikes.

O Drupes ribbed or torulose.

Young shoots, spikes, and leaves beneath more or less rusty pubescent or tomentose ; drupes ribbed, ...*S. Javanica.*
Glabrous ; spikes glabrous ; drupes torulose-ribbed, ...*S. spicata.*

O O Drupes terete and smooth.

Glabrous, also the spikes ; drupes ovoid-turbinate, ...*S. polycarpa.*

† † Flowers pedicelled, in simple or compound racemes. Drupes terete.

Glabrous; racemes compound, minutely appressed pubescent, stout; drupes ovoid-turbinate (unripe), ...*S. pedicellata.*
Glabrous; leaves caudate acuminate ; racemes simple, slender, pubescent ; drupes ovoid-turbinate, ...*S. caudata.*

× × Stamens collected into 5 bundles. Flowers white.

Racemes shortly tomentose, short ; pedicels very short and thick, ...*S. leucantha.*
Racemes appressed pubescent, forming slender panicles ; pedicels long, filiform, ..*S. cratægoides.*

1. S. SULCATA, Kurz in Journ. As. Soc. Beng. 1871. 65.

Var. *α.* GLABRIOR, leaves more coriaceous, quite glabrous and shining above ; drupes larger and glabrous.

Var. *β.* PUBESCENS, leaves narrower and longer acuminate, less glossy and almost opaque, pubescent on the midrib beneath ; young shoots rusty villous-tomentose ; drupes (unripe) pubescent.

HAB. Not rare in the drier hill-forests of Martaban, at 3000 to 6000 feet elevation ; var. *β.* Upper Tenasserim, Daunat pass, 4000 ft. (Dr. Brandis).—Fr. March.

2. S. LUCIDA, Wall. Cat. 4414 ; DC. Prod. VIII. 255.

HAB. Not unfrequent in the hill-forests of Martaban, especially on the Nattoung ridges, at 5—7000 ft. elevation.—Fl. March.

3. S. RACEMOSA, Roxb. Fl. Ind. II. 539 ; DC. Prod. VIII. 255. (*S. Hamiltoniana*, Wall. Cat. 4420 ; DC. l. c. 254).

Var. *α.* ROXBURGHIANA, racemes usually simple or nearly so, leaves quite glabrous (*S. rigida*, Wall. Cat. 4422), or the midrib beneath slightly appressed pubescent.

Var. *β.* COMPOSITA, racemes more or less branched ; leaves glabrous.

HAB. Rather frequent in the open and dry forests, all over Ava and

Pegu down to Martaban and Upper Tenasserim, up to 2000 ft. elevation.—Fl. Jan., Febr.

4. S. LEIOSTACHYA, Kurz in Journ. As. Soc. Beng. 1873. 89. and in Trim. Journ. Bot. 1875. 329.

HAB. Tenasserim (Helf. 3656).

5. S. JAVANICA, (*Dicalyx Javanicus*, Bl. Bydr. 1117; *S. ferruginea*, Roxb. Fl. Ind. II. 542; DC. Prod. VIII. 257; Miq. Fl. Ind. Bat. I/2. 466; *S. rubiginosa*, Wall. ap. DC. l. c.; *S. Horsfieldiana*, Miq. Suppl. Fl. Sumatr. 475, auctore ipso "foliis latioribus" tantum differt).

HAB. Tenasserim (Helf. 3645).

6. S. SPICATA, Roxb. Fl. Ind. II. 541; DC. Prod. VIII. 254, non Bth. Fl. Austr.

HAB. Tenasserim (Helf. 3660 and 3664), from Moulmein southwards.—Fl. Aug.

If *Myrtus laurina*, Retz. Obs. IV. 27, is really the same as Roxburgh's plant, the specific name will have to be changed in favour of Retz's.

7. S. POLYCARPA, Wall. Cat. 4423 A. and B.; DC. Prod. VIII. 255. (*S. attenuata*, Wall. Cat. 4426; DC. l. c. 256).

HAB. Frequent in the hill-forests of Martaban, especially Nattoung ridges, Taipo &c., at 4—5000 ft. elevation; Tenasserim, from Moulmein (Falconer) to Tavoy (Wall.).—Fl. Febr., Aug.

8. S. PEDICELLATA, Kurz in Journ. As. Soc. Beng. 1873. 89.

HAB. Rare in the tropical forests of Toukyeghat east of Tounghoo, Martaban.—Fr. April, May.

9. S. CAUDATA, Wall. Cat. 4413; DC. Prod. VIII. 256.

HAB. Chittagong (Hf. and Th.); Upper Tenasserim, Taoo road (Dr. Brandis).—Fr. April.

10. S. LEUCANTHA, Kurz in Journ. As. Soc. Beng. 1873. 89.

HAB. Frequent in the swamp-forests between the Irrawaddi and Lhein rivers of Pegu.—Fl. Jan

11. S. CRATÆGOIDES, D. Don. Fl. Napal. 145; DC. Prod. VIII. 258.

HAB. Martaban, Nattoung hills (Rev. F. Mason).

OLEACEÆ.

Conspectus of Genera.

Subord. I. OLEACEÆ. Stamens 2 only, situated between a pair of corolla-lobes.

Trib. 1. *JASMINEÆ.* Corolla-limb 5—12-lobed. Ovules erect.

* *Fruit a dry compressed capsule.*

NYCTANTHES. Corolla twisted in bud. Albumen none. Scabrous trees, with simple leaves.

* * *Fruit a* 2- *or by abortion* 1-*lobed drupe.*

Jasminum. Corolla twisted in bud. Albumen none. Shrubs, usually scandent, rarely trees; leaves simple or compound.

Trib. 2. *OLEEÆ.* Corolla 4-lobed, rarely 6—8-cleft or wanting, with or without a tube. Ovules pendulous or attached laterally near the summit of the cell.

* *Corolla-lobes twisted in bud. Ovules pendulous. Fruit a dry capsule or samara.*

Schrebera. Corolla salver-shaped. Ovary 2-celled, with 3—4 ovules in each cell. Capsule 2-valved. Seeds winged. Albumen none. Trees or shrubs, the leaves pinnate or rarely simple.

* * *Corolla lobes valvate in bud or nearly so, rarely imbricate. Fruit drupaceous or berry-like. Leaves simple.*

× Corolla-lobes more or less imbricate.

Osmanthus. Corolla-lobes blunt. Endocarp of drupes thin. Flowers clustered, axillary.

× × Corolla-lobes induplicate-valvate.

Chionanthus. Petals usually elongate, free or very shortly united at the base. Seeds with or without albumen. Trees; inflorescence various.

Olea. Ovary-cells 2-ovuled. Seeds albuminous. Panicles axillary or terminal. Trees or shrubs, erect.

Myxopyrum. Flowers minute, in axillary panicles. Seeds albuminous. Woody climber, with sharply 4-cornered branches.

Subord. II. SALVADORACEÆ. Corolla 4-parted, without tube. Stamens 4, alternating with the corolla-lobes. Ovules erect.

Azima. Petals free, linear. Stamens free. Ovary 2-celled, the cells 2-ovuled. Shrubs, spiny armed.

Nyctanthes, L.

1. N. Arbor tristis, L. sp. pl. ed. 2. 8; Roxb. Fl. Ind. I. 86; Bot. Reg. t. 399; DC. Prod. VIII. 314; Bot. Mag. t. 4900; Bedd. Sylv. Madr. t. 240.

Hab. Rare in the low forests above Rangoon; Ava, Irrawaddi valley (J. Anderson); Tenasserim (Helf. 3697) cult. ?—Fl. Fr. CS.

Jasminum, L.

Conspectus of Species.

Ser. 1. *Unifoliolatæ.* Leaves simple, with a jointed petiole.

* Bracts minute or short and filiform, rarely wanting.

× Calyx-lobes short, or the calyx almost truncate.

\+ Flowers corymbose.

Glabrous; pedicels 2—5 lin. long; calyx 5-cornered, almost truncate, ...*J. extensum.*

Pubescent; flowers sessile; calyx-teeth as long as the calyx-tube, ...*J. decussatum.*

\+ \+ Flowers in poor axillary racemes; pedicels ½—1. long; calyx-teeth distinct.

† Corolla-lobes blunt, glabrous.

Nerves conspicuous on both sides, usually with a gland in the axils; corolla-lobes usually 8, rarely 5—7, ...*J. subglandulosum.*

Nerves thin and obsolete, without glands; corolla-lobes usually 5, ...*J. attenuatum.*

† † Corolla-lobes acuminate.

Glabrous ; leaves more or less narrow, very long acuminate ; corolla-lobes 9—12, .. *J. laurifolium.*

× × Calyx-lobes longer than the calyx-tube, subulate.

Small shrub, almost erect ; branchlets puberulous ; leaves penninerved, ...*J. Sambac.*

Twining, glabrous ; leaves 3-nerved, ...*J. anastomosans.*

* * *Bracts leafy, conspicuous, shorter or longer than the calyx.*

× Bracts longer than the calyx, leafy, white-discoloured.

More or less pubescent, especially the branchlets ; corolla-tube about ½ in. long or longer, ...*J. Rottlerianum.*

Glabrous when adult, tufted-hairy in the nerve-axils beneath ; corolla-tube about an in. long, ...*J. coarctatum.*

× × Bracts shorter than the calyx ; calyx-lobes subulate ; pedicels 1—2 lin. long.

More or less pubescent ; corolla- and calyx-lobes each 6—9, the latter 4—5 lin. long, pubescent, ...*J. hirsutum.*

Glabrous or puberulous ; corolla- and calyx-lobes each 6—7, the latter only a line long, more or less pubescent, ... *J. scandens.*

Ser. 2. *Foliolatæ.* Leaves unpaired-pinnate or pinnately 3-foliolate, rarely occasionally 1-foliolate.

Glabrous ; leaves unpaired-pinnate ; calyx-lobes subulate, about 3—4 lin. long, .. *J. grandiflorum.*

1. J. EXTENSUM, Wall. Cat. 2862 ; DC. Prod. VIII. 308.

HAB. Ava, towards the base of the Taong-dong (Wall.).—Fl. Fr. Nov.

2. J. DECUSSATUM, Wall. Cat. 2860 ; DC. Prod. VIII. 306.

HAB. Not unfrequent in the tropical forests, from Martaban down to Upper Tenasserim, up to 3000 ft. elevation.—Fl. Febr. ; Fr. March.

3. J. SUBGLANDULOSUM, Kurz in Trim. Journ. Bot. 1875. 329, and For. Fl. Burm. II. 151.

HAB. Not unfrequent in the tropical forests of the southern slopes of the Pegu Yomah above Rangoon ; Tenasserim ; South Andamans.—Fl. Decb. ; Fr. Febr.

4. J. ATTENUATUM, Wall. Cat. 2864 ; DC. Prod. VIII. 309.

HAB. Not unfrequent in the damp hill-forests of Martaban, especially the Nattoung mountains, at 5000 to 7200 ft. elevation.—Fl. Fr. March.

5. J. LAURIFOLIUM, Roxb. Fl. Ind. I. 91 ; DC. Prod. VIII. 303.

Var. *α.* GENUINUM, calyx-lobes up to 4 lin. long, much longer than the calyx-tube.

Var. *β.* BRACHYLOBUM, calyx-lobes as long or a little longer than the calyx-tube, more or less recurved.

HAB. Var. *β.* frequent in the tropical forests of Martaban and Tenasserim ; Ava, Khakyen hills (J. Anderson).—Fl. Febr.—April ; Fr. April, May.

6. J. Sambac, Ait. Hort. Kew. ed. 1. I. 8; Wight Icon. t. 704; DC. Prod. VIII. 301; Bot. Reg. t. 1 and t. 497.—(*J. quinqueflorum*, Heyne ap. DC. Prod. VIII. 302.)

Hab. Frequently cultivated all over Burma and often met with in neglected lands, poonzohs and rubbishy places near villages, but apparently not really wild. Said to be wild in Prome district.—Fl. March, April.

7. J. anastomosans, Wall. Cat. 2863; DC. Prod. VIII. 305.

Hab. Frequent in the tropical forests of the eastern slopes of the Pegu Yomah and in those from Martaban down to Tenasserim.—Fl. March, April.

8. J. Rottlerianum, Wall. Cat. 2865; DC. Prod. VIII. 305; Wight Icon. t. 1249.

Hab. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah, especially along the Choungmenah choung (Khaboung). Fl. April.

9. J. coarctatum, Roxb. Fl. Ind. I. 91; DC. Prod. VIII. 308. (*J. reticulatum*, Wall. Cat. 2869; DC. Prod. VIII. 303).

Hab. Frequent in the tropical forests of the eastern slopes of the Pegu Yomah and in those of Martaban east of Tounghoo; also hills of Chittagong.—Fl. April, May.

Roxburgh's plant has the calyx 5-lobed while Wallich's has it usually 8-lobed.

10. J. hirsutum, Willd. sp. pl. I. 36; Smith Exot. Bot. II. 117. t. 118; Wight Icon. t. 702; Bot. Mag. t. 1931; Bot. Reg. t. 15. (*Nyctanthes hirsuta*, L. sp. pl. 8; *J. multiflorum*, Andr. Bot. Repos. t. 496, non Roth; *J. pubescens*, Willd. sp. pl. I. 37; Roxb. Fl. Ind. I. 91; DC. Prod. VIII. 302).

Hab. Ava, Bhamo (J. Anderson); Pegu (Dr. Brandis).—Fl. Jan.

11. J. scandens, Vhl. Symb. III. 2; DC. Prod. VIII. 306; Roxb. Fl. Ind. I. 89. (*J. syringæfolium*, Wall. Cat. 2861; DC. Prod. VIII. 306.)

Var. *α.* genuinum, all parts more glabrous, the branchlets and leaves especially so.

Var. *β.* lætum, (*J. lætum*, Wall. Cat. 2859; DC. Prod. VIII. 306), the branchlets, nerves of the leaves, and sometimes also the under-surface of the leaves themselves puberulous.

Hab. Frequent in all leaf-shedding forests, especially the tropical and open ones, all over Burmah, from Arracan, Pegu, and Martaban down to Tenasserim.—Fl. Dec.—Febr.; Fr. April, May.

12. J. grandiflorum, L. sp. pl. 9; DC. Prod. VIII. 313; Bot. Reg. t. 91; Roxb. Fl. Ind. I. 100.

Hab. Burmah (accord. Rev. F. Mason.)

Schrebera, Roxb.

1. Sch. swietenioides, Roxb. Corom. Pl. II. t. 101 and Fl. Ind. I. 109; DC. Prod. VIII. 675; Bedd. Sylv. Madr. t. 248.

Var. *α.* genuinum, all parts glabrous, also the inflorescences, calyxes and corollas; capsules 2 in. long.

Var. *β.* pubescens, (*Sch. pubescens*, Kurz in Flora 1872. 399), all younger parts and inflorescence softly pubescent; calyx densely and minutely tomentose; corolla sparingly puberulous outside; capsules much smaller.

Hab. Var. *α.* not unfrequent in the mixed forests all over Pegu and Martaban, entering also the savannahs.—Fl. April; Fr. Jan.

Chionanthus, L.

(*Linociera*, Swartz).

Conspectus of Species.

* *Petals or corolla-lobes very narrow, involute.*

Glabrous; nerves prominent beneath; petals $\frac{2}{3}$ lin. long, ... *Ch. minutiflorus.*

* * *Petals or corolla-lobes broader, flat or concave, but not involute.*

× Veins visible between the strong lateral nerves. (Leaves 3—6 in. long).

Panicle ample, leafy-bracted; nerves impressed on the upper side of the leaves; drupes 1—$1\frac{1}{2}$ in. long, ... *Ch. Palembanicus.*

Panicles rather small, with minute bracts; nerves prominent on both sides; drupes $\frac{1}{2}$ in. long, ... *Ch macrophyllus.*

× × No visible veins between the nerves. (Leaves 6—10 in. long.)

Panicle minutely puberulous; petals linear; drupes about an in. long, .. *Ch. montanus.*

1. Ch. minutiflorus, Kurz in For. Fl. Burm. II. 159.

Hab. Martaban hills east of Tounghoo (Dr. Brandis).

2. Ch. Palembanicus, Miq. Suppl. Fl. Sumatr. 558; Kurz in Journ. As. Soc. Beng. 1876. 139.

Hab. Not unfrequent in the coast-forests of the Andamans.—Fl. May, June.

3. Ch. macrophyllus, (*Linociera macrophylla*, Wall. Cat. 2826. A.; DC. Prod. VIII. 297; *Linociera attenuata*, Wall. Cat. 2839; *Linociera picrophloja*, F. Muell. Fragm. III. 139. t. 24?).

Hab. Ava (J. Anderson); Pegu (Brandis); tropical forests of Upper Tenasserim (Wall.).—Fr. Jan.

4. Ch. montanus, Bl. Bydr. 681; Miq. Fl. Ind. Bat. II. 552. (*Ch. insignis*, Miq. Suppl. Fl. Sumatr. 559).

Hab. Rather rare in the hill-evg-forests of Martaban east of Tounghoo, at 1500 to 2000 ft. elevation; Upper Tenasserim (Falconer; Helf. 3688).

Doubtful Species.

1. *Linociera ? oblonga*, Wall. Cat. 2844 ; DC. Prod. IV. 298.

Hab. Ava, Taong-dong.

2. *L. ? loranthifolia*, Wall. Cat. 2842 ; DC. Prod. VIII. 298.

Hab. Upper Tenasserim, Amherst.

The fragments seen by me look Olacinaceous.

Olea, Tournef.

Conspectus of Species.

* *Corolla almost rotate, the limb spreading. Inflorescence axillary, or at the same time terminal.* (Olea, *L.*)

× Petals only a line long or thereabouts.

Leaves rigidly coriaceous, the nerves prominent ; panicle glabrous, ... *O. dentata.*

Leaves thin-coriaceous, the nerves prominent ; panicles glabrous, ... *O. dioica.*

× × Petals about 3 lin. long.

Leaves veinless between the nerves ; drupes nearly ½ in. long, ... *O. terniflora.*

* * *Corolla funnel-shaped, with a longer or shorter tube. Panicles all terminal.* (Ligustrum, *Tournef.*)

Panicles glabrous or pubescent ; drupe 3—4 lin. long, ... *O. robusta.*

1. O. DENTATA, Wall. Cat. 2840 ; DC. Prod. VIII. 286.—(*O. ? salicifolia*, Wall. Cat. 2821 ; DC. l. c.).

Hab. Frequent in the drier hill-forests and the hill-eng-forests of Martaban and Upper Tenasserim, at 2000 to 3000 ft. elevation ; also in the tropical forests above Rangoon.—Fl. June—Jan. ; Fr. April, May.

2. O. DIOICA, Roxb. Fl. Ind. I. 106 ; DC. Prod. VIII. 286.

Hab. Hills of Chittagong.—Fl. March, Apr. ; Fr. July.

3. O. TERNIFLORA, (*Linociera ? terniflora*, Wall. Cat. 2845 ; DC. Prod. VIII. 297 ; *Linociera ? acuminata*, Wall. Cat. 2844 ; DC. l. c. 298 ; *O. linoceroides*, Wight Icon. t. 1241 ?)

Hab. Frequent in the tropical and moister upper mixed forests of the Pegu Yomah and from Martaban down to Tenasserim ; also Chittagong. —Fl. Dec., Jan. ; Fr. Jan.

4. O. ROBUSTA (*Phillyrea robusta*, Roxb. Fl. Ind. I. 101 ; *Visiania robusta*, DC. Prod. VIII. 289 ; *Ligustrum robustum*, Kurz Pegu Rep. App. A. 88.)

Var. *α.* GENUINA, panicle puberulous and more or less glabrescent ; leaves glabrous.

Var. *β.* PUBESCENS (*Ligustrum pubescens*, Wall. Pl. As. rar. III. 44 in adnot. ; DC. Prod. VIII. 294 ; *Visiania Sumatrana*, Miq. Fl. Ind. Bat. II. 549 ; *Ligustrum punctatum*, Griff. Not. Dicot. 741).

Hab. Hills of Pegu (Brandis) ; Chittagong ; Var. *β.* Ava, Taong-dong (Wall.) and in forests around Moulmein, Upper Tenasserim (Griff.). Fl. July, Aug. ; Fr. Nov., Decb.

Myxopyrum, Bl.

1. M. SMILACIFOLIUM, Bl. Mus. Lugd. Bat. I. 320.—(*Chondrospermum smilacifolium*, Wall. Cat. 2837 ; DC. Prod. VIII. 301 ; *Chionanthus ? smilacifolius*, Wall. in Roxb. Fl. Ind. I. 108).

Var. *α.* GENUINUM, leaves more or less entire or remotely and minutely spinescent-toothed ; panicle ample, slender, as long as or longer than the leaves.

? Var. *β.* ILICIFOLIUM, leaves somewhat narrower and stronger nerved and veined, strongly and crowdedly spinose-serrate ; panicles rather contracted, not above 2 in. long, axillary and leaf-opposed, rarely terminal, the peduncle and branchings strong and 4-cornered.

HAB. Var. *α.* in the forests of Chittagong ; var. *β.* rather frequent in the tropical forests of Martaban and in those of the Andaman and Cocos-islands.—Fl. April, May.

Chondrospermum ? coriaceum, Wall. Cat. 2838 ; DC. Prod. VIII. 301. (nomen nudum), from Ava, Taong-dong, is unknown to me.

Azima, Lamk.

1. A. TETRACANTHA, Lamk. Encycl. Bot. I. (1783) 343 ; Poir. in Lamk. Ill. Gen. III. (1823) 401 t. 807.—(*Monetia barlerioides.* L'Her. Stirp. Nov. I. (1784) I. t. 1 ; Tulasn. in Ann. d. sc. nat. 4 ser. VIII. 113 ; Miq. Fl. Ind. Bat. I/2 596 ; *Fagonia montana*, Miq. Fl. Ind. Bat. I/2. 496, *teste* Hf.).

HAB. Frequent in the dry forests and shrubberies of Ava and Prome, occasionally entering the savannahs.—Fr. March.

APOCYNACEÆ.

Conspectus of Species.

Ser. I. GYMNOSPERMÆ. Seeds naked, *i. e.*, without a deciduous tuft of hairs at their extremities, sometimes persistently hairy-fringed all round, more so at the extremities. Anthers free.

* *Corolla valvate in bud.*

Trib. 1. *STRYCHNEÆ.* Ovary entire, 2-celled, with axile placentas.

STRYCHNOS. Corolla-throat naked or bearded. Berry corticate or sappy, the seeds imbedded in pulp. Albumen horny. Trees or scandent shrubs.

* * *Corolla twisted-imbricate in bud.*

Trib. 2. *CARISSEÆ.* Ovary entire, 2—1-celled, with axile or parietal placentas.

* *Ovary* 1-*celled, with* 2 *parietal placentas.*

× Fruit an indehiscent drupe or berry.

CHILOCARPUS. Corolla-throat naked. Seeds in pulp. Albumen horny. Scandent shrubs.

WILLUGHBEIA. As preceding, but seeds without albumen. Scandent shrubs.

× × Fruit a dehiscent capsule.

Allamanda. Corolla-throat with scales, the anthers included in the tube; albumen scanty. Erect shrubs, with showy 5-merous flowers.

* * *Ovary 2-celled, with axile placentas.*

× Corolla-throat furnished with 5 or 10 scales or appendages. Disk none.

Thevetia. Calyx many-glanded inside. Drupe unequally 2-celled, not pulpy. Trees or shrubs, with large flowers.

Melodinus. Calyx glandless inside. Drupe incompletely 2-celled, the seeds in pulp. Albumen fleshy. Scandent shrubs.

× × Corolla-throat naked.

Carissa. Corolla salver-shaped, hairy within. Style short or filiform. Ovary-cells 1—4, rarely many-ovuled, the ovules in 2 rows. Berry 3—1-celled, sappy. Albumen fleshy. Shrubs or trees, usually spiny-armed.

Winchia. Apparently like preceding, but the style deeply 2-cleft and the ovules in numerous rows. Unarmed, with ternary leaves.

Trib. 3. *PLUMERIEÆ.* Ovary consisting of 2 more or less distinct carpels, each with a single placenta.

* *Fruit-carpels indehiscent, not follicular.*

× Calyx gamosepalous.

Rauwolfia. Calyx toothed. Corolla elongate-funnel-shaped. Disk cupular or annular. Drupes sappy, usually connate at the base or up to the middle. Albumen fleshy. Herbs, under-shrubs, or shrubs.

Ochrosia. Calyx toothed or lobed. Disk none or obsolete. Drupes usually paired, fleshy-fibrous. Trees or shrubs.

× × Sepals free, reflexed.

Cerbera. Calyx glandless inside. Disk none. Drupes usually single by abortion, fibrose-woody. Trees.

* * *Fruit-carpels follicular, dehiscing along the ventral suture; rarely indehiscent. Corolla-throat naked.*

× Seeds in no way winged nor hairy-fringed.

† Seeds not imbedded in pulp.

‡ Albumen none.

Kopsia. Follicle elliptical to oblong, indehiscent, 1-seeded. Trees.

Calpicarpum. Follicle broad, obliquely truncate, slowly dehiscing, 1-seeded. Shrubs.

‡ ‡ Albumen present.

Vinca. Follicle elongate-linear, continuous, many-seeded. Albumen fleshy. Erect shrubs or under-shrubs.

Gynopogon. Follicle elongate, moniliform-contracted between the seeds. Albumen horny, homogeneous. Shrubs, more or less twining.

Hunteria. As preceding, but albumen ruminate.

† † Seeds imbedded in pulp.

Tabernæmontana. Follicles continuous, several-seeded. Albumen none. Disk none. Erect shrubs.

× × Seeds winged or hairy-fringed..

Plumieria. Disk none or fleshy and adnate to the calyx. Follicles elongate, many-seeded. Seeds winged. Albumen none. Fleshy trees.

Alstonia. Corolla salver-shaped. Anthers included. Seeds fringed all along the borders, more so at both extremities. Albumen scanty. Trees or shrubs.

Ser. II. COMESPERMÆ. Seeds furnished at one or both ends with a deciduous tuft or crown of long silky hairs; anthers usually cohering in a cone.

Trib. 4. *ECHITIDEÆ.* Characters as above.

* *Corolla-throat naked, without scales. Seeds comose at the apex only or rarely fringed all round.*

× Disk annular, cupular, or consisting of 5 free or connate scales. Scandent shrubs.

\+ Ovary entire, 2-celled.

† Anthers included.

Beaumontia. Calyx-segments leafy. Disk-glands 5, free or connate. Albumen fleshy. Flowers large and showy.

† † Anthers more or less exserted.

Vallaris. Calyx small. Corolla almost rotate-bell-shaped. Disk 5-lobed. Albumen scanty. Flowers rather showy.

Parsonsia. Calyx small. Disk-scales 5, free or connate. Filaments often spirally twisted. Flowers small.

\+ \+ Ovary-carpels 2, distinct.

† Anthers exserted, cohering in a cone round the stigma.

Pottsia. Disk 5-lobed. Flowers small, panicled.

† † Anthers included in the corolla-tube. Disk cupular or 5-cleft.

O Corolla induplicate-valvate.

Urceola. Corolla urceolate or globose. Calyx glandless inside. Disk entire or 5-lobed. Flowers small.

O O Corolla twisted-imbricate.

‡ Seeds narrowed at apex into a long slender neck.

§ Follicle moniliform.

Parameria. Corolla salver- or almost bell-shaped. Calyx many-glanded inside. Flowers small.

§ § Follicle continuous, not moniliform.

Ecdysanthera. Corolla almost urceolate, the lobes sinistrorsely twisted. Disk entire or 5-lobed. Flowers small.

Anodendron. Corolla salver-shaped, the lobes narrow. Disk truncate or 5-lobed. Follicle woody-coriaceous. Seeds albuminous. Flowers small.

Cercocoma. Corolla salver-shaped, the lobes broad. Disk 5-cleft. Follicle coriaceous. Albumen none. Flowers rather showy.

‡ ‡ Seeds not contracted into a long neck.

§ Ovary-carpels more or less immersed in the fleshy disk.

Aganosma. Calyx large and leafy, divided almost to the base. Disk-lobes short. Anthers appendaged. Flowers large and showy.

Ichnocarpus. Corolla salver-shaped. Disk-lobes on the top of the ovary, distinct. Flowers small. Calyx gamosepalous, 5-toothed.

Epigynum. Corolla salver-shaped. Disk-lobes epigynous round the ovary and almost connate.

§ § Ovary entirely superior.

Chonemorpha. Corolla very large, salver- or funnel-shaped, the lobes twisted. Follicle woody. Albumen scanty.

× × Disk none, or rudimentary. Trees.

Holarrhena. Corolla salver-shaped. Stamens included. Seeds comose at the apex only. Albumen none.

* * *Corolla-throat with a corona of scales or fringes. Disk none.*

× Anthers included in the corolla-tube. Seeds comose at the apex.

Nerium. Corolla-tube with 5 laciniate-toothed scales. Seed albuminous. Erect trees or shrubs.

× × Anthers exserted, united or cohering in a cone round the stigma. Seeds comose at the hilum.

Strophanthus. Corolla-lobes elongate or caudate, bordered by membranous lobes or scales, each produced into 2 longer or shorter segments. Shrubs, usually scandent.

Wrightia. Corona of corolla consisting of 5 or 10 erect scales either distinct or united, or rarely the throat naked. Trees or erect shrubs.

Strychnos, L.

Conspectus of Species.

* *Erect trees, without tendrils.*

× Corolla glabrous at the throat, the tube long.

Corymbs peduncled, terminal or terminating axillary shoots; berries the size of an orange or smaller, many-seeded, the pericarp thick and corky, ... *St. nux-vomica.*

× × Corolla villous at the throat.

Panicle very short, axillary; corolla-tube about 2 lin. long; berries 1-seeded, the pericarp coriaceous, ... *St. potatorum.*

Panicle brachiate, large, terminal; corolla-tube 4—5 lin. long, ... *St. Wallichiana.*

* * *Scandent shrubs with woody, 2-cleft hook-tendrils.*

Corolla-tube 1½ lin. long, bearded at the throat; berry oblong, 1-seeded, the pericarp membranous, ... *St. laurina.*

Corolla consisting of 5 free glabrous petals; berry globular, 1- (or 2 ?) seeded, the pericarp coriaceous, ... *St. acuminata.*

1. St. nux-vomica, L. sp. pl. 271; Roxb. Corom. Pl. I. 8. t. 4 and Fl. Ind. I. 575; DC. Prod. IX. 15 (excl. syn. *S. colubrina*, Wight Icon. t. 434); Bth. in Linn. Proc. I. 103 (excl. syn. *S. ligustrina*, Bl.); Griff. Not. Dicot. 82. t. 411. f. 1; Bedd. Fl. Sylv. Madr. t. 243.

Hab. Common in the leaf-shedding forests, especially the upper mixed and low ones, all over Burma, from Ava and Martaban down to Tenasserim, up to 2000 ft. elevation.—Fl. April, May; Fr. CS.

2. St. potatorum, L. f. Suppl. 148; Wight Illustr. II. t. 156; DC. Prod. IX. 15; Roxb. Corom. Pl. I. 9. t. 5 and Fl. Ind. I. 576.

Hab. Not unfrequent in the open and dry forests of the Prome District; also Ava.—Fr. Sept.—March.

3. St. Wallichiana, Steud. Nomencl.; DC. Prod. IX. 13; Bth. in Linn. Proc. I. 103.

Hab. Rare in the tropical forests of the eastern slopes of the Pegu Yomah, as along the northern Choungmenah (Khaboung-choung).—Fl. April.

4. St. laurina, Wall. Cat. 1591; DC. Prod. IX. 13; Bth. in Linn. Proc. I. 102; Griff. Not. Dicot. 83.

Hab. Tenasserim, from Moulmein down to Mergui.—Fl. Aug.

Of *St. ovalifolia*, Wall. (Bth. l. c. 103) I have seen only Penang specimens with young inflorescences which may belong to the above. The panicles, however, are long-peduncled and axillary, and the tube seems very long and not bearded at the throat.

5. St. acuminata, Wall. Cat. 1593; DC. Prod. IX. 14.

Hab. Not unfrequent along the rocky sea-coasts of the Andamans; Tenasserim (Wall.).—Fl. Fr. April, May.

Willughbeia, Roxb.

Conspectus of Genera.

Inflorescence shortly peduncled; berry ovate, smooth, ... *W. edulis.*
Flower-clusters sessile or nearly so; berry globular, wrinkled, ... *W. Martabanica.*

1. W. edulis, Roxb. Corom. Pl. III. t. 280 and Fl. Ind. II. 57; DC. Prod. VIII. 321.

Hab. Chittagong.—Fl. Fr. nearly ∞.

2. W. Martabanica, Wall. Pl. As. Rar. III. 45. t. 272; DC. Prod. VIII. 321.

Hab. Martaban, Thoungyeen (Dr. Brandis); Upper Tenasserim, Moulmein (Wallich.).—Fr. April.

Allamanda, L.

*1. A. cathartica, L. Mant. 214; DC. Prod. VIII. 318.

Hab. Much cultivated in villages all over Burma, and in the Moulmein District apparently half-wild (Falconer).

Thevetia, L.

*1. Th. neriifolia, Juss. in Steud. Nomencl. cit.; DC. Prod. VIII. 343. (*Cerbera Thevetia*, L. sp. pl. 304; Bot. Mag. t. 2309).

Hab. Much cultivated in Burmese villages, especially in Prome.—Fl. March.

Carissa, L.

Conspectus of Species.

* * *All parts glabrous.*

Ovary-cells 4-ovuled; berries the size of a plum; leaves usually blunt or retuse, .. *C. carandas.*
Ovary-cells 2-ovuled; berries the size of a pea or somewhat larger; leaves usually acute, ... *C. diffusa.*

* * *All parts, especially while young, shortly and softly puberulous.*

Ovary-cells 2-ovuled; berries the size of a pea, ... *C. hirsuta.*

1. C. Carandas, L. Mant. 52; Roxb. Corom. Pl. I. 55. t. 77 and Fl. Ind. ed. Wall. II. 523; DC. Prod. VIII, 332; WA. in Comp. Bot. Mag. I. 276. t. 12; Wight Icon. t. 426; Bedd. Fl. Sylv. Madr. 156. t. 19. f. 6.

Var. β. congesta, Bedd. Man. For. Fl. Madr. I. 157 (*C. congesta*, Wight Icon. t. 1289), leaves almost orbicular; cymes short.

Var. γ. paucinervia, Bedd. l. c. (*C. paucinervia*, Wight Icon. t. 1290), leaves linear-lanceolate.

Hab. Var. α. Very frequent in the dry forests of the Prome District. Fl. March.

2. C. diffusa, Roxb. Fl. Ind. ed. Wall. II. 524; DC. Prod. VIII. 332; Wight Icon. t. 427.

Hab. Andamans, Termoklee island, along the rocky coast.—Fl. Fr. May.

3. C. hirsuta, Roth Nov. pl. sp. 128; DC. Prod. VIII. 333. (*C. villosa*, Roxb. Fl. Ind. ed. Wall. II. 525; Wight Icon. t. 437).

Hab. Ava, apparently frequent in the Irrawaddi valley.—Fr. Jan.

Winchia, A. DC.

Conspectus of Species.

Panicle glabrous, ... *W. calophylla*
Panicle minutely puberulous, ... *W. atroviridis.*

1. W. calophylla, DC. Prod. VIII. 326.; Deless. Icon. sel. V. t. 46.

Hab. Upper Tenasserim, Moulmein (Wall.).—Fl. March.

2. W. atroviridis, Kurz For. Fl. Burm. II. 170. (*Chilocarpus ? atroviridis*, Bl. Mus. Lugd. Bat. 153; *Hunteria ? atroviridis*, Wall. Cat. 1614; DC. Prod. VIII. 351).

Hab. Tenasserim, Tavoy (Gomez).

Probably not sufficiently distinct from the preceding species. *Hunteria cuspidata*, Wall. Cat. 1609 (DC. Prod. VIII. 351) without indication of locality seems to be a Malayan plant and is probably the same as *Melodinus orientalis*, Bl.

Rauwolfia, L.

1. R. serpentina, Bth. and Hf. Gen. pl. II. 697. (*Ophioxylon serpentinum*, Willd. sp. pl. IV. 979; Roxb. Fl. Ind. ed. Wall. II. 530; DC. Prod. VIII. 342; Wight Icon. t. 849).

Hab. Very frequent in the mixed and open, especially in the savannah forests, all over Burma from Chittagong and Ava down to Tenasserim. Fl. April, May.

Ochrosia, Juss.

1. O. SALUBRIS, Bl. Mus. Lugd. Bat. I. 158.—*(Cerbera oppositifolia*, Lamk. Enc. Bot. I. 62 ; DC. Prod. VIII. 354).

HAB. Rare in the tidal and beach-forests of the Andamans.—Fl. Fr. Febr., March.

Cerbera, L.

1. C. ODALLAM, Gærtn. Fruct. II. 193. t. 124 ; Roxb. Fl. Ind. ed. Wall. I. 692 ; DC. Prod. VIII. 313 ; Bot. Mag. t. 1845 ; Wight Icon. t. 441.

HAB. Not unfrequent in the littoral, chiefly the tidal, forests, from Chittagong down to Tenasserim and the Andamans.—Fl. March—May.

Calpicarpum, G. Don.

1. C. ROXBURGHII, G. Don. Gen. Syst. Dichl. IV. 100 ; Wight Icon. t. 431. (*Kopsia vincæflora*, Bl. Bydr. 1030 ; DC. Prod. VIII. 352 ; *Kopsia fruticosa*, DC. Prod. l. c. ; Bot. Mag. t. 4220 ; *Cerbera fruticosa*, Roxb. Fl. Ind. ed. Wall. I. 690).

HAB. Martaban, tropical forests, as in Yoonzeleen (Brandis); Tenasserim, Tavoy (Wall.) ; Rangoon (Cleghorn) ; generally planted in all Burmese villages.—Fl. Aug.—Decb.

Vinca, L.

*1. V. ROSEA, L. sp. pl. 305 ; Roxb. Fl. Ind. II. 1. ; Bot. Mag. t. 248 ; DC. Prod. VIII. 382. *(V. Guilelmi Waldemarii*, Klotzsch Bot. Ergebn. Prinz Waldemer. t. 70).

HAB. A South-American plant much cultivated in villages all over the country, and sometimes domesticated in rubbishy places.—Fl. Jan.—May.

Gynopogon, Forst. (1786).

(*Alyxia*, Banks.)

Conspectus of Species.

Corolla-tube nearly $\frac{1}{2}$ in. long, ... *G. stellatum.*
Corolla-tube only about 2 lin. long, ... *G. breviflorum.*

1. G. STELLATUM, Lab. Sert. Austr. Caled. 30. t. 34.—*(Alyxia stellata*, Roem. and Schult. Syst. Veg. IV. 439 ; DC. Prod. VIII. 346 ; Miq. Fl. Ind. Bat. II. 407 ; Roxb. Fl. Ind. ed. Wall. II. 639 ; *Alyxia odorata*, Wall. Cat. 1606 ; DC. Prod. VIII. 347).

HAB. Along the rocky sea-coasts of Tenasserim and the Andamans. —Fl. April, May.

2. G. BREVIFLORUM, Kurz in For. Fl. Burm. 177.

HAB. In the tropical forests of Martaban, Yoonzeleen (Brandis) ; Upper Tenasserim, Taoo table-land, at about 2000 ft. elevation (Brandis).

Hunteria, Roxb.

1. H. LANCEOLATA, Wall. Cat. 1611; DC. Prod. VIII. 350. *(Gynopogon lanceolatum*, Kurz in For. Fl. Burm. II. 177.)

HAB. Tenasserim Tavoy (Wall.).

Unknown to me. Can it be the same as my *Gynopogon breviflorum?*

Tabernæmontana, Plum.

Conspectus of Species.

* *Bractlets persistent, conspicuous, longer than the pedicels.*

Corolla-tube longer than the tube; calyx-lobes 2—3 lin. long, linear-lanceolate, .. *T. recurva.*

Corolla-lobes half as long as the tube, ... *T. calycina.*

* * *Bracts and bractlets very deciduous and small, or persistent and minute.*

× Calyx-lobes acute or acuminate. Follicles tapering at the base but not stalked, without an appendage (usually cylindrical, with 6 longitudinal lines often raised.)

\+ Cymes branched from the base and the branchings usually recurved or horizontal.

O Flowers large, showy, the corolla-lobes as long as the tube.

Corolla about an in. across, the lobes as long as the tube; all parts glabrous, .. *T. divaricata.*

O O Flowers small, the corolla-lobes only ½—⅓ the length of the tube.

Glabrous; calyx-lobes acute; corolla-tube hardly ½ in. long, ... *T. ophiorrhizoides.*

Glabrous, very like the preceding; calyx-lobes rather acute; corolla-tube nearly an inch long; follicles long-beaked, ... *T. rostrata.*

\+ \+ Cymes brachiate, longer or shorter peduncled, more or less erect.

O Calyx-lobes broad, leafy, 3—4 lin. long.

Glabrous; corolla-lobes nearly as long as the tube, ... *T. alternifolia.*

O O Calyx-lobes narrow, small.

Glabrous, the cymes short-peduncled; calyx-lobes subulate-acuminate; corolla-tube slender, ¾ in. long, the lobes half as long or shorter; anthers inserted below the middle of the corolla-tube, ... *T. membranifolia.*

Glabrous, leaves exactly as in preceding; cymes long-peduncled; calyx-lobes said to be ovate, rather blunt, ... *T. graciliflora.*

Glabrous; peduncle 3 times as long as the 4—5 lin. long petioles; calyx-lobes ovate, acute, ... *T. microcarpa.*

× × Calyx-lobes rounded. Follicle long-stalked, with a coriaceous acuminate dorsal appendage.

Glabrous; cymes small, longer or shorter peduncled, ... *T. subcapitata.*

1. T. RECURVA, Roxb. Hort. Bengh. 20 and Fl. Ind. II. 26; Wight Icon. t. 476; DC. Prod. VIII. 371.—(*T. gratissima*, Ldl. Bot. Reg. t. 1084).

HAB. Frequent in the tropical forests of the southern spurs of the Pegu Yomah above Rangoon; also in Upper Tenasserim and Chittagong, apparently always in the neighbourhood of tidal streams.—Fl. May, June.

2. T. CALYCINA, Wall. Bot. Reg. in adn. ad t. 1273 and Cat. 1577 ; DC. Prod. VIII. 372.

HAB. Tenasserim, Tavoy (Wall.).

Not seen by me, and probably same as preceding.

3. T. DIVARICATA, Bl. Bydr. 1027, non Don. (*Nerium divaricatum*, L. sp. pl. 306 ; *T. coronaria*, R. Br. Hort. Kew. II. 72 ; DC. Prod. VIII. 373 ; Roxb. Fl. Ind. II. 23 ; Wight Icon. t. 477).

HAB. Generally planted in villages all over Burma and the adjacent islands.—Fl. Oct.—Dec.

4. T. OPHIORRHIZOIDES, Kurz in Journ. Asl Soc. Beng. 1873. 89.

HAB. Frequent in the hill-forests of Martaban, at 3000 to 5000 ft. elevation.—Fl. April.

5. T. ROSTRATA, Wall. in Bot. Reg. adnot. ad. t. 1273 and Cat. 1578 ; DC. Prod. VIII. 371.

HAB. Ava, Irrawaddi valley, at Segain (Wall.).—Fl. Fr. Nov.

I have seen only fruiting specimens, which in foliage quite agree with the preceding species (which is a hill-species).

6. T. ALTERNIFOLIA, L. sp. pl. 308 ; Roxb. Fl. Ind. II. 24. (*T. crispa*, Roxb. Hort. Beng. 20 and Fl. Ind. II. 24 ; Wight Icon. t. 470 ; DC. Prod. VIII. 371).

HAB. Frequent in the beach-forests, and along the coasts generally, of the Andamans.—Fl. Febr.—May ; Fr March, April.

7. T. MEMBRANIFOLIA, Kurz in Journ. As. Soc. Beng. 1873. 90.

HAB. In the tropical forests of Toukyeghat, east of Tounghoo.—Fl. April, May.

I fear referable to the following species, of which I have now seen only a very imperfect specimen. The leaves are the same in both.

8. T. GRACILIFLORA, Wall. in Bot. Reg. adnot. ad. t. 1273 and Cat. 1576 ; DC. Prod. VIII. 372.

HAB. Tenasserim, Amherst (Wall.).

9. T. MICROCARPA, Wall. in Bot. Reg. adnot. ad. t. 1273 and Cat. 1581. ; DC. Prod. VIII. 372.

HAB. Ava, Taong-dong (Wall.).

Unknown to me.

10. T. SUBCAPITATA, Wall. Cat. 1579 ; DC. Prod. VIII. 373.

HAB. Pegu (more probably Martaban) (Dr. Brandis) ; Tenasserim, Tavoy (Wall.).—Fl. Dec.

Plumieria, Tournef.

*1. P. ACUTIFOLIA, Poir. Suppl. II. 667 ; DC. Prod. VIII. 392. —(*P. acuminata*, Ait. Hort. Kew ed. alt. I. 70 ; Roxb. Fl. Ind. II. 20 ; Bot. Mag. t. 3952 ; Wight Icon. t. 471).

Hab. Very frequently planted in Burmese villages.—Fl. March, April.

Alstonia, R. Br.

Conspectus of Species.

Inflorescence densely pubescent, ... *A. scholaris.*
Peduncles glabrous, the calyx and pedicels minutely puberulous, ... *A. spectabilis.*

1. A. scholaris, R. Br. in Mem. Wern. Soc. I. 76; DC. Prod. VIII. 409; Wight Icon. t. 422 (mala); Bedd. Sylv. Madr. t. 242.

Hab. Not unfrequent in the leaf-shedding, especially the open and dry, forests, from Prome and Martaban down to Tenasserim; also Chittagong.—Fl. Oct.—Sept.

2. A. spectabilis, R. Br. in Mem. Wern. Soc. I. 76; DC. Prod. VIII. 409.

Hab. Coast-forests of the Andamans.

Hardly specifically different from the preceding species.

Beaumontia, Wall.

1. B. grandiflora, Wall. Tent. Fl. Napal. 15. t. 7; Bot. Reg. t. 911; Bot. Mag. t. 3213; DC. Prod. VIII. 403.—(*Echites grandiflora*, Roxb. Fl. Ind. II. 14, non Roth).

Hab. Chittagong hills.—Fl. DS.

Vallaris, Burm.

1. V Heynei, Spreng. Syst. veg. I. 635; Dalz. and Gibson Bomb. For. 144 (*V dichotoma*, Wall. Cat. 1621; Wight Icon. t. 438; DC. Prod. VIII. 400; *Echites dichotoma*, Roxb. Fl. Ind. II. 19; *Peltandra solanacea*, Roth. nov. sp. 132).

Var. *α.* glabra, all parts glabrous.

Var. *β.* pubescens, all the softer parts puberulous, the leaves (adult) minutely rough-puberulous beneath.

Hab. Frequent in the dry, especially the mixed dry, forests of the Prome District.—Fl. Fr. March.

Doubtful Species.

1. *V. ? anceps*, Wall. Cat. 1622; DC. Prod. VIII. 400 (nomen nudum).

Hab. Tenasserim, Tavoy (Wall.).

I have only seen leaves, which seem hardly referable to *Apocynaceæ*.

Parsonsia, R. Br.

1. P. spiralis, R. Br. in Wall. Cat. 1631; DC. Prod. VIII. 402. (*Heligme Javanica*, Bl. Bydr. 1043; DC. Prod. VIII. 425; *P. oblonga*,

Wall. Cat. 1632; DC. Prod. VIII. 402; *Heligme Rheedii*, Wight Icon. t. 1303?; *Spirostemon spiralis*, Griff. Not. Dicot. 80. t? 411 f. 1)

Hab. Pegu, above Rangoon; Upper Tenasserim, Moulmein (Wall.). —Fl. April.

Pottsia, Hook. and Arn.

1. P. Cantoniensis, Hook. and Arn. Bot. Voy. Beech. 198. t. 43; Miq. Fl. Ind. Bat. II. 450 (*Euthodon paniculatus*, Griff. Not. Dicot. 48. t. 458. f. 2.)

Hab. Tenasserim, Mergui (Griff.).

Urceola, Roxb.

1. U. lucida, Bth. and Hf. Gen. pl. II. 716 (*Chavannesia lucida*, DC. Prod. VIII. 444; *Chavannesia esculenta*,, DC. Prod. l. c.; *Urceola esculenta*, Bth. in Kurz For. Fl. Burm. II. 184).

Hab. Common all over Pegu (*teste* G. W. Strettell); Tenasserim (Wall.).

Parameria, Bth.

1. P. glandulifera, Bth. and Hf. Gen. Pl. II. 715. (*Ecdysanthera glandulifera*, DC. Prod. VIII. 443; Wight Icon. t. 1307; *E. Griffithii* Wight in text pedicellis et calyce pubescente; Miq. Fl. Ind. Bat. II. 452; *Ecdysanthera barbata*, Miq. Fl. Ind. Bat. II. 451).

Hab. Not unfrequent along the borders of the tidal forests of the coast of the Andamans; also Tenasserim.—Fr. March, April.

Ecdysanthera, Hook. and Arn.

1. E. brachiata, DC. Prod. VIII. 443.

Hab. Ava; Khakyen hills (J. Anderson).—Fl. RS.

Anodendron, A. DC.

1. A. paniculatum, A. DC. Prod. VIII. 442. (*Echites paniculata*, Roxb. Fl. Ind. II. 17; Wight Icon. t. 396).

Hab. Not unfrequent in the tropical forests of the Pegu Yomah, Martaban, and Tenasserim, especially along choungs.—Fl. Jan., Febr.; Fr. the following year.

Cercocoma, Miq. non Don.
(*Rhynchodia*, Bth.).

1. C. Wallichii, Miq. Fl. Ind. Bat. II. 445. (*Echites rhyncosperma*, Wall. Pl. As. rar. I. 43. t. 49; *Rhyncosperma Wallichii*, DC. Prod. VIII. 431).

Hab. Not unfrequent in the tropical forests of Martaban down to Tenasserim, rare along the eastern slopes of the Pegu Yomah; also Ava (Mrs. Burney).—Fl. April.

Ichnocarpus, R. Br.

1. I. frutescens, R. Br. Hort. Kew. ed. 2. 69; DC. Prod. VIII. 435; Wight Icon. t. 430. (*Echites frutescens*, Roxb. Fl. Ind. II. 12).

Var. *α.* genuina, leaves and follicles glabrous.

Var. *β.* pubescens, leaves beneath (while young on both sides) and the young follicles appressed rusty-pubescent.

Hab. Frequent in the leaf-shedding, especially the mixed and savannah-, forests all over Burma; var. *β.* chiefly in the dry forests of Ava and Prome.—Fl. CS.; Fr. HS.

Aganosma, G. Don.

Conspectus of Species.

Calyx-lobes nearly an inch long, tawny-velvety; nerves of leaves impressed, .. *A. calycina.*

Calyx-lobes only 2—3 lin. long, glabrous; nerves of leaves prominent beneath and uniting towards the margin, ... *A. marginata.*

1. A. calycina, DC. Prod. VIII. 432. (*A. Wallichii*, Don Gen. Syst. IV. 77.)

Hab. Tenasserim, Tavoy (Gomez).—Fl. Sept.

2. A. marginata, G. Don. Gen. Syst. IV. 77; DC. Prod. VIII. 433; Wight Icon. t. 425. (*Echites marginata*, Roxb. Fl. Ind. II, 15; *A. macrocarpa*, DC. Prod. VIII. 434).

Hab. Frequent in the open and lower mixed forests from Ava and Martaban down to Tenasserim; also Chittagong.—Fl. March, April; Fr. the next year.

Epigynum, Wight.

1. E. Griffithianum, Wight Icon. t. 1308; Walp. Ann III. 42.

Hab. Tenasserim, Mergui (Griff.).

Holarrhena, R. Br.

1. H. antidysenterica, Wall. Cat. 1672; DC. Prod. VIII. 413; Brand. For. Fl. 326. t. 40.—(*Chonemorpha antidysenterica*, G. Don Gen. Syst. Gard. IV. 79; Wight Icon. t. 439).

Var. *α.* genuina, all parts (also the inflorescence) glabrous.

Var. *β.* Codaga (*H. Codaga*, G. Don Gen. Syst. Gard. IV. 78; DC. Prod VIII. 414; Wight Icon. t. 1297; *H. pubescens*, Wall. Cat. 1673; DC. Prod. VIII. 413), all parts (also the inflorescence) shortly velvety pubescent.

Hab. Not unfrequent in the dry and open forests, all over Burma, from Chittagong and Ava down to Tenasserim; var. *β.* chiefly in the drier upper mixed forests.—Fl. March, April; Fr. CS.

Chonemorpha, G. Don.

(Epichysianthus, Voigt.)

1. Ch. mærophylla, G. Don Gen. Syst. IV. 76; DC. Prod. VIII. 430; Wight Icon. t. 432.—(*Echites macrophylla*, Roxb. Fl. Ind. II. 13; *Ch. mollis*, Miq. Fl. Ind. Bat. II. 444).

Hab. Frequent in the tropical forests of the Andamans, especially along choungs.—Fl. May.

Nerium, L.

1. N. odorum, Sol. Hort. Kew. ed. 1. I. 297; Roxb. Fl. Ind. II. 2; Bot. Mag. t. 2032; DC. Prod. VIII. 420.

Hab. Often cultivated in villages, especially around monasteries, all over Burma.

Strophanthus, DC.

Conspectus of Species.

* *Corolla-lobes acute or acuminate, but not produced into long tails.*

Floral bracts ovate, acute, stiff, only 1½ lin. long, ... *St. brevicaudatus.*

* * *Corolla-lobes produced into tails 2 or more inches long.*

× Floral bracts and the conform calyx-lobes stiff, linear-subulate.

Corolla (without the tails) about an inch long, ... *St. Griffithii.*

Corolla (without the tails) about ½ in. long, ... *St. longicaudatus.*

× × Floral bracts and the conform calyx-lobes flaccid, reflexed, linear.

Corolla about ⅔ in. long; bristles twice as long as the anthers, ... *S. caudatus.*

1. St. brevicaudatus, Wight Icon. t. 1302.

Hab. Doubtful, probably Mergui, Tenasserim (Griff.).

N. B. The Griffithian specimens of this species in H. BC. are from Malacca.

2. St. Griffithii, Wight Icon. t. 1300; Miq. Fl. Ind. Bat. II. 442.—(*St. pentaphyllus*, Griff. Not. Dicot. 78; *St. Horsfieldianus*, Miq. Fl. Ind. Bat. II. 442).

Hab. Upper Tenasserim, Moulmein (Falconer).

3. St. longicaudatus, Wight Icon. t. 1299; Miq. in Fl. Ind. Bat. II. 442.

Hab. South Tenasserim.

4. St. caudatus, *(Echites caudata*, Burm. Fl. Ind. 68, t. 26; *St. dichotomus*, DC. in Bull. Soc. Philom. III. 123 and Prod. VIII. 407; *Nerium caudatum*, Roxb. Fl. Ind. II. 9).

Hab. Tenasserim, from Moulmein down to Tavoy (Rev. Parish, Falconer).—Fl. Jan.

Wrightia, R. Br.

Conspectus of Species.

* *Throat of corolla furnished with scales or fringes.*

× Corolla-throat fringed with a ring of branched long filiform scales.

All parts glabrous; corolla white, the lobes linear-oblong..... *W. tinctoria.*

× × Scales of corolla-throat thick and fleshy, entire or lobed.

All parts especially the leaves, shortly and densely pubescent; corolla-lobes broad, the scales of the throat cuneate, 2—3-lobulate,..... *W. mollissima.*

All parts glabrous; corolla red, the lobes broad, the scales large, rounded, obsoletely crenate,..... *W. coccinea.*

* * *Corolla-throat quite naked.*

Glabrous, the leaves small and narrow; pedicels filiform; corolla small, white,
.. *W. religiosa.*

1. W. TINCTORIA, R. Br. in Mem. Wern. Soc. I. 73; Wight Icon. t. 444; Bot. Reg. t. 933; DC. Prod. VIII. 406; Bedd. Sylv. Madr. t. 241 (*Nerium tinctorium*, Roxb. Fl. Ind. II. 4).

HAB. Burmah (according to Rev. F. Mason), probably Ava?

2. W. MOLLISSIMA, Wall. Cat. 1627 and Pl. As. rar. II. t. 146; DC. Prod. VIII. 405. (*W. Wallichii*, DC. Prod. VIII. 405; Dalz. and Gibs. Bomb. Fl. 145?).

HAB. Common in the lower and upper mixed forests, from Chittagong and Ava down to Tenasserim, up to 2000 ft. elevation.—Fl. April, May; Fr. CS.

3. W. COCCINEA, Sims. Bot. Mag. t. 2696; Bot. Cab. t. 894; Wight Icon. t. 442; DC. Prod. VIII. 407. (*Nerium coccineum*, Roxb. Fl. Ind. II. 2).

HAB. Chittagong hills.

4. W. RELIGIOSA, Bth. Gen. pl. II. 713. (*Echites religiosa*, Teysm. and Binn. in Nat. Tydsch. Ned. Ind. XXV. 48).

HAB. Tenasserim and the adjoining Siamese provinces.—Fl. Fr. HS.